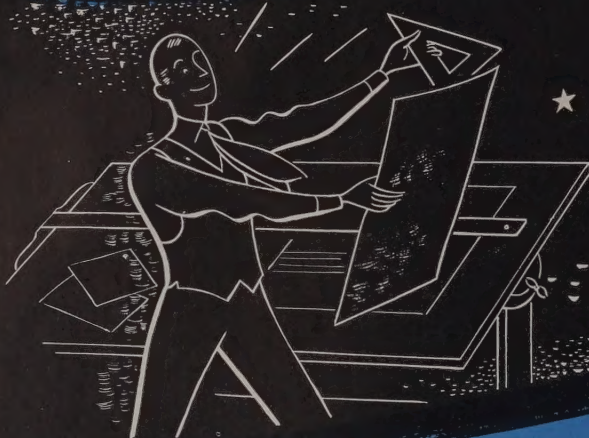


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NOVEMBER • 1942

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PENCIL POINTS

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J. R. F. Swanson

Vahan Hagopian
Architect

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Professional Adviser

NOVEMBER
1942

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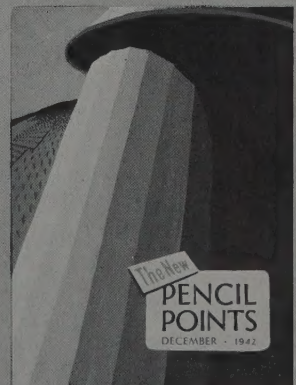
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NEXT MONTH

In December, the great field of rural architecture, which offers tremendous opportunities to architects, is explored • Mary Heaton Vorse, famous author, portrays, from the layman's viewpoint, the changes in rural life wrought by technological advance • Vernon Demars, District Architect for the Farm Security Administration in San Francisco, surveys typical rural medical developments, including implications of the growing medical insurance programs, clinics in work camps, mobile clinics, small hospitals, and larger centralized hospitals • Franklin C. Wells, of the office of Holden, McLaughlin and Associates, indicates the growth of industrial farming and sees in it many possibilities for the architect, both in architectural services and in development of new building materials from farm products • Also a new house, Selected Details of construction, and Data Sheets



MODERNIZING IDEAS

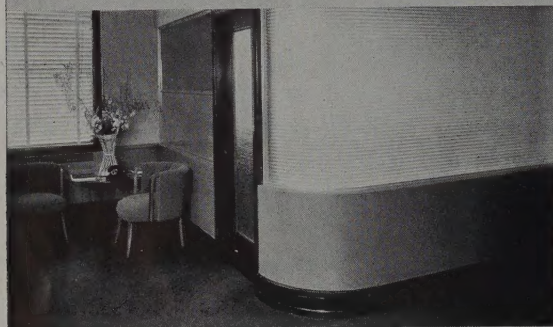
★ *that sparkle with decorative interest*



A Smart Dress Shop provides privacy and softly diffused light in its fitting room by the use of Satinol Flutex Glass. Mills, Rhines, Bellman and Nordhoff, Inc., Architects.



A Beauty Shop in Saks Fifth Avenue, Chicago, provides soft flattering light over the dressing tables, through Satinol Flutex panels, lighted from behind. Architect, James F. Eppenstein.



An Office installation demonstrates the beauty and modern efficiency of Satinol Flutex for partitions. Privacy is assured without blocking light from adjoining rooms.

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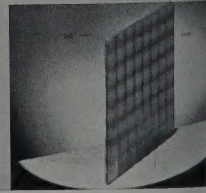
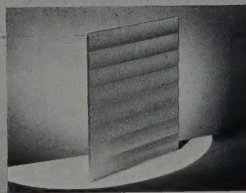
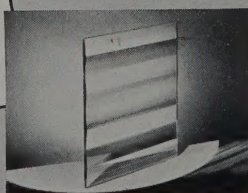


REMEMBER THE
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The future is what we're fighting for, isn't it?



Every reader of this advertisement believes, somehow, that the future is worth the fight. Production records say so. Your personal sacrifices say so. Your crowded hours say so.

We read your hearts as we read our own.

But what about this future, anyway? Are we going to accept it as it is served up to us, or are we folks in industry going to do a job of pre-fabrication on it?

We can, you know.

We *can* do some Imagineering, here and now. We *can* decide where we go from here. We *can* slip an eighth day of thinking time into our crowded seven-day week, if we will.

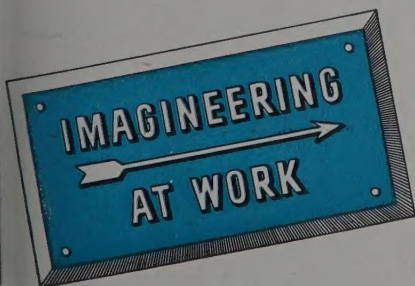
We can build new models, in our minds at least. We can take the facts and the promise of the new materials and methods we are learning about in the war, and dream them into the new products and improved services that will make new jobs.

We can even provide the wherewithal which will prime the future. Every War Bond we buy does that.

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Getting together on future ideas is putting Imagineering into practice.

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**with these
FA WIRDUCT
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End Closure



*Standard
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*Flanged
Coupling*



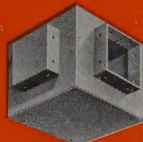
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Coupling Box*



Expansion Coupling



Curved Elbow



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enclose wires and cables in FA WIRDuct. It provides a complete duct system of distribution for light, heat and power, and control wires as permitted under the 1940 National Electrical Code rules.

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in planning and designing an efficient and convenient FA WIRDuct distribution system. No obligation, of course. Write for name and address of the one nearest you. Bulletin 66 gives details. . . If you are planning a light and power installation with capacities in excess of those permitted in FA WIRDuct, we recommend FA Busduct, fully described in Bulletin 65. Either or both bulletins sent promptly on request . . . Frank Adam Electric Co., St. Louis, Mo.

*Standard 10 ft. section, with hinged cover,
showing location of knockouts*





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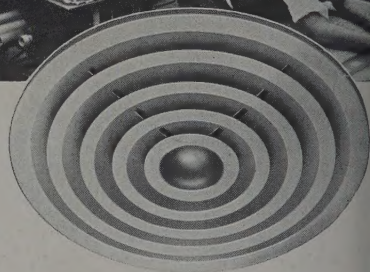
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and Test Stand



WARS AREN'T WON ON BATTLEFIELDS ALONE!



THE Aerofuse Outlet provides ventilation, air conditioning and heat for thousands of America's war-workers, helping them to produce the arms that must be wrought before the final victory on the battlefield can be won. The Aerofuse Outlet is scientifically engineered and its performance so surely charted that it can be installed by war plants rushing into production without time-wasting weeks of tests and experiments. Complete engineering data and performance specifications together with a simple

size selection system help make the Aerofuse the first choice of war plant designers.

AEROFUSE OUTLET

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Survey shows they reflect 61% more light than gray cement floor in same plant. This improvement in reflection increases vertical illumination, eliminates gloomy shadows, and lights under side and vertical faces of work. Because of better illumination, accidents decline, rejects decrease, output rises.

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The light color enlivens the workers' attitude, promotes morale, encourages cleanliness. Where dirt and rubbish are easily visible, they are less likely to be neglected. Maintenance is simple—frequent sweeping, occasional damp mopping, periodic scrubbing.

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IF YOUR FLOORS ARE WHITE, YOUR PLANT GETS MORE LIGHT

**For the sake
of your war
production
read this new
book about
LIGHT
FROM FLOORS**

USE THE COUPON to get complete story of light-reflecting floors that increase illumination, speed production, reduce errors and accidents.

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Please send me copy of new book "Light from Floors."

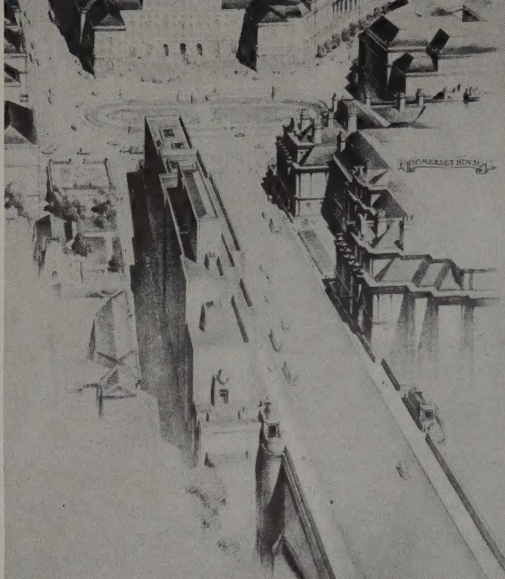
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BELOW, Sir Edwin Lutyens (left) and Sir Charles Bressey before a map of London, redesigning it as they envision it. LEFT, sketch of proposed Waterloo Bridge "traffic circus" at the war



On October 13th, news dispatches outlined plans for rebuilding London after the war. The scheme, prepared at the direction of the Royal Academy, was the work of Sir Edwin Lutyens, noted architect, and Sir Charles Bressey, regional planner. A day or so later, photographs, including those shown here, arrived by transatlantic plane.

The transportation of pictures of such monuments via the latest, most exciting manifestation of technological advance furnishes a nice example of incongruity in which, perhaps, lies the most fitting comment on the entire scheme's value.

For while the plans pay lip service to all the clichés of modern urban planning, they blithely ignore fundamental realities. There would be, if the scheme were to be adopted, parks and playgrounds in London's slums, and spacious vistas around St. Paul's Cathedral and other monuments to a dead past. The Academy must have felt that something had to be done about traffic; a circumferential high-speed highway would link railroad stations, some of which would have to be moved. All rail lines inside the ring would have to be electrified and underground.

But as for modernizing the city, or removing the causes of the blight which shrouded it before the blitz — well, the dispatches say it is not to be "stream-lined," whatever that may mean; nor is it to be rebuilt in the likeness of Manhattan, nor is the charm of dirty medievalism to be retained.

These are worthy objectives. The reports to date give no hint of understanding the basic problems involved, of providing (either in the manner of laying out the plan or in suggesting legal instruments for implementing it) the controls which alone could direct the city's growth into desirable channels. And the fact that the photographs — of which those shown here are fair samples — depict block after block of arcades, arches, columns, and other trappings of monumental architecture makes one believe that the scheme as a whole suffers from a conception of London as a monument.

City planning can not be monumental per se and be successful. The imposition of grandeur upon sprawling London can fail there as successfully as it has elsewhere. If it is to achieve a healthy, continuing existence, a city plan has to be alive, to recognize and turn to its own purposes the economic, social, and aesthetic forces which, if unprovided for, can in time wreck even legislative controls.

Of course, as this is written, the full story has not appeared in the press. Perhaps impressions of the Academy scheme are erroneous; news accounts notoriously stress drama rather than fact. Nevertheless it seems fortunate that the scheme apparently has no official status — though here again, news reports may give an inaccurate impression.

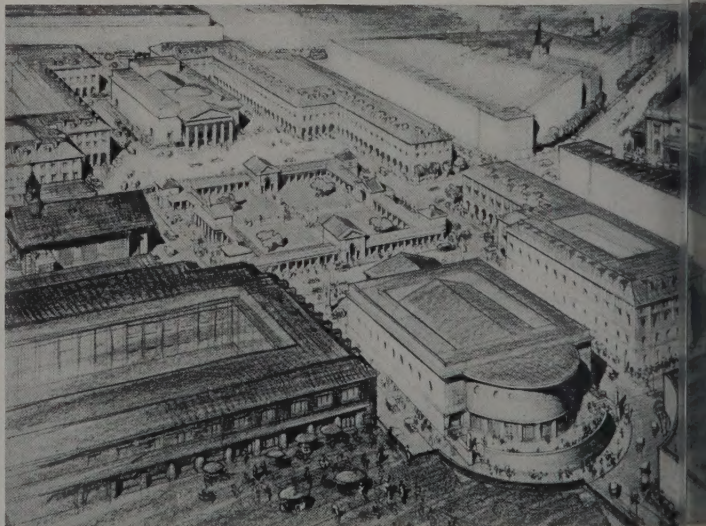
MONUMENTAL LONDON

?

ROYAL ACADEMY PUBLICIZES A SCHEME

AND SCORNS MODERN STREAMLINING

A great entertainment center would be carved out of Covent Garden Market — theaters, cinemas, etc. would surround a central colonnaded garden.



WIDE WORLD PHOTOS

Four Faces Look Out

and One looks down



Look up, America! Look into the eyes that will scan centuries of horizons. Do you see defeat there—or despair? No. Proudly, serenely these faces survey the future. One remembers a Valley Forge. Another recalls a nation divided against itself, the pitting of brother against brother. There were bitter times and corrupt times. Still the youthful nation survived, taking strength from the flow of many wounds and growing to greater stature. Do you see the hand of destiny there? True, there is another face. Its likeness can never be captured on canvas or carved in stone, but the knowledge of its presence inspires us on to greater effort. Four faces look out from a mountain side and One looks down from the greatest of heights. Look up, America!

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PARACHUTES for air-borne invasion...

Carrying the attack to the enemy...

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It calls for new plants to produce the synthetic fibres needed in such tremendous quantity... plant conversion to meet many of the production problems involved.

In every war plant, heating is a vital consideration... for proper heat is essential to maximum output.

For 50 years, steam has proved its ability to provide steady, even, economical heat in buildings of every type.

Steam, harnessed and brought under control with Webster Systems of Steam Heating, has been used successfully in more than 75,000 buildings.

Today, we are engaged in direct war work but manufacturing facilities are still available to supply Webster Steam Heating Equipment for buildings serving the war effort.

Essential repairs for Webster Systems are available on A-10 priority, under W.P.B. Emergency Repair Order P-84. Orders should be limited to actual needs.

Warren Webster & Company, Camden, N. J. Representatives in 60 principal Cities

Webster
Steam Heating

LETTERS from READERS

The Winner!

B. J. Nichols, recipient of the \$500 War Bond given to the winner of name competition conducted by this magazine, expresses his thanks in the following letter.

You can imagine my amazement when your registered letter arrived yesterday notifying me that the copy I had written, supporting the name **PLAN**, had won the prize. I guess it happens only once in a lifetime and, naturally, I got a terrific kick out of it.

I can't help but feel that you would have much preferred to award the first prize to an architect, and I think it is indeed commendable that, when you found an advertising man was the winner, you resisted the temptation to change your minds. I will put that bond away with some others in the safe deposit box and will most likely use it to help educate my son who will probably turn out to be an advertising man or an architect because of it.

Thanks again. And clear sailing for the **NEW PENCIL POINTS**—or **PLAN** if you decide to adopt the name.

*

Bright Idea

*William B. Bartlett, Jr. was one of the 26 contestants who suggested the name **PLAN** for the **NEW PENCIL POINTS** as it is now being published. This is the first time that I have ever crawled out of my shell for an advertised contest. I did so simply because the solution to the problem seemed to be so completely obvious. Because none of that august body had been so moved, I played with the idea that perhaps I had stumbled upon a Bright Idea, or something. Therefore it was somewhat shattering to my ego to be told that twenty-five others had also felt the nudge of genius!*

It would be interesting to know how many of the winning contestants were *not* architects or draftsmen. I am an instructor of history in a boys' boarding school. My interest in architecture is a kind of academic hobby, for which reason Thomas Jefferson is rather a personal idol. My Master's thesis in American history concerned the growth and westward movement of domestic architectural design from the Revolution to the Civil War. Once in a while I play with a drafting board in a very amateurish way. At the moment my interests are centered upon small, individually-designed houses that

will appeal to professional people, and others of like tastes, in the postwar era—arbitrarily costing approximately five to ten thousand dollars, and appropriately furnished to the exclusion of those items that reflect the owner's personality and artistic leanings. I hope that **PLAN** will devote some of its pages to such a program.

*

Shape of Things to Come?

I notice that since the government priorities have cut off our fabulous income (derived from one FHA cottage per year and a bay window) it has become fashionable to conjure up here-afters. During previous cessations of abnormal business it has been my wont to settle back on an old crate of *cyma reversas* with my feet on the hardware section of Sweet's catalogue and thus enjoy large quantities of in-action accompanied by the rhythmic drone of some stray New Jersey mosquitoes. Now, however, following the style, I have had installed, at considerable expense, a "glassy stare" and sit for days on end probing the future cloudless skies where freight travels by air and the contour of women's hats is controlled by law.

The reaction, after my first seance is that our profession has been somewhat impractical in this matter of broad-scale planning. Instead of all this loose talk about the under-housed and over-fed, why not consider some really practical project like moving all the cities in the country so they line up with the radial street system of Washington, D. C. My preliminary survey shows, for instance, that "F" street would pass somewhere between St. Louis and Peoria, making it necessary to move both of them. Pennsylvania Avenue runs a hundred miles north of Chicago which makes a particularly fine project since an island would have to be built in Lake Michigan before the city could be moved. San Francisco falls near nothing at all and that is really a blessing because all those people really should be moved out of that damp, cold climate. Some of them think they like it, but they have been doped by real estate interests.

I am not quite sure how much such a Federal project would cost but it would be worth it because Congressmen would have to travel a straight path and come right home from work.

LAWRENCE A. ENERSEN,
Department of Architecture,
Harvard University

Enlist that Scrap

... FOR THE
DURATION



When you turn in your scrap *this month*, your obligation does not end. For the steel furnaces must run next month, too -- and the next -- and the next.

Steel production of eighty-five to ninety million tons of ingots a year calls for approximately 3,000,000 tons of scrap per month--about 750,000 tons a week--over 100,000 tons a day. Half of this comes from the industry itself, but the other half must come from the public.

Reduced to its simplest terms, if the steel industry is to produce steel at the rate and in the volume that our war program demands, then America must collect nearly **ONE POUND OF SCRAP EVERY DAY** for each man, woman and child in the nation.

You, the reader of this publication, have this clear, individual obligation: As a patriotic citizen and a responsible executive or workman, you must act to the extent of your ability to **KEEP SCRAP FLOWING** to the steel plants.

Do your part to enlist scrap for the duration.

WHY NOT TRY THIS YOUNGSTOWN IDEA?

Red-white-and-blue barrels like this stand on important street corners, in both business and residential districts of Youngstown, Ohio. They provide a convenient and tangible means of getting action from citizens, young and old, who are bombarded daily with radio, newspaper, magazine and other advertising urging them to turn in scrap.

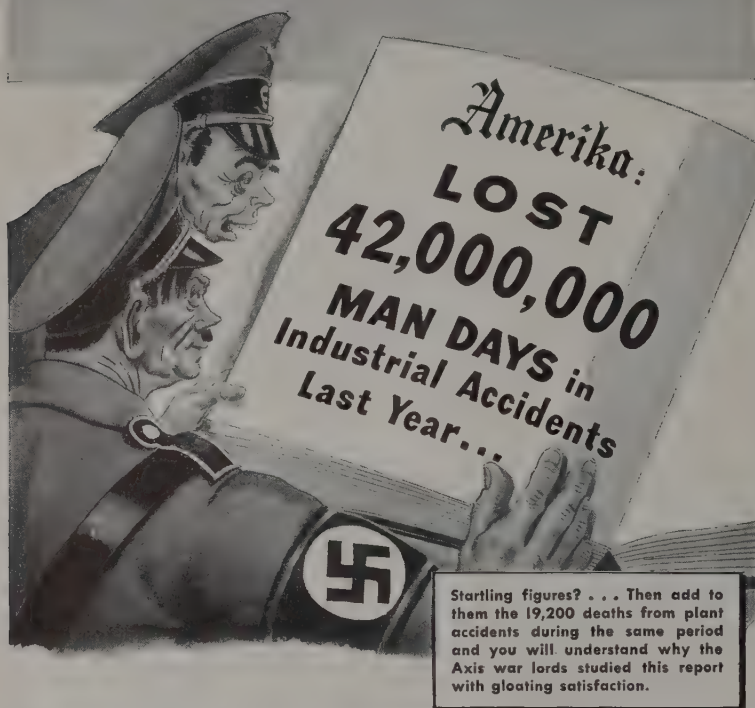
That this is an effective idea is proven by the fact that two city trucks are kept busy every day, collecting scrap from these barrels and answering calls from householders who have other scrap to contribute, too large to go into the barrels. Perhaps **YOUR** city can try this plan, too.

This Company joins in the counter attack against accidents by subscribing to the National Safety Council's War Production Fund to Conserve Manpower.

THE YOUNGSTOWN SHEET AND TUBE COMPANY
YOUNGSTOWN, OHIO



YOU CAN REDUCE THIS "AID AND COMFORT" TO THE ENEMY



W.P.B. RECOMMENDS GOOD LIGHTING TO REDUCE ACCIDENTS

The following appears on page one of the publication "PLANT EFFICIENCY", issued by the War Production Board:

“ Striking examples of close relationship between the quality of lighting and accident frequency are not difficult to find . . . So many factors are involved in industrial accidents that it is practically impossible to say what percentage is caused by poor lighting. It is reasonable to assume, however, that with the quicker perception and greater clarity of vision which good lighting makes, possible, accident hazards will be recognized faster and more clearly, with correspondingly increased chances of avoiding them . . . ”

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For more than two generations, this organization has concentrated on the advancement of illumination in American institutions. All through these years, Holophane engineers, in the field and in the drafting rooms, have played an important role in the development of PLANNED LIGHTING for industry . . . Since Pearl Harbor they have shown hundreds of plants the way to faster, smoother war production through lighting engineered to meet specific manufacturing needs and working conditions . . . The Holophane principle of light control calls for prismatic glass units, which require a minimum of critical materials. They provide efficient light for essential working areas with assured savings in man hours, electric power and maintenance costs.

FOR SAFE, EFFICIENT ILLUMINATION, CONSULT HOLOPHANE ENGINEERS



Plant management is urged to investigate the signal advantages that Holophane lighting can bring to the plant today. Without charge, the Holophane engineering department offers consultation and recommendation for the most effective, economical illumination . . . Write for the latest Holophane bulletin "Lighting for War Industry", available to plant executives.

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342 MADISON AVENUE, NEW YORK
HOLOPHANE CO., LTD., 385 YONGE STREET, TORONTO, CANADA

"INVENTIONS FOR VICTORY" EXHIBITION

A section of a prefabricated house is one of the features in the Brooklyn Museum (Eastern Parkway, Brooklyn, N. Y.) exhibition, "Inventions for Victory," which was opened on October 30, and will run until January 3. Since prefabricated housing and minimum expense furnishings may have great postwar possibilities, the Museum has devoted a prominent place in the exhibition to this section.

The house (two half rooms of which are shown) is created from panels weighing 128 pounds per panel. All panels, either window, door, or flat wall surfaces, are interchangeable in their structural entities in and of themselves. Innumerable types of houses may be designed from the twenty types of panels. The house is demountable and may be disassembled and re-erected without loss or injury to the structural units. If it is to be erected as a permanent house, the joints are glued with waterproof resin glue. The house may be made to conform to any standard plan and can be finished with gable or flat roof.

The exhibition also shows new materials and new uses of familiar materials, resulting from the exigencies of wartime production, in the fields of architecture, house furnishings and equipment, textiles, clothing, accessories.

Though some of the materials are now procurable by civilians, the show is primarily a forecast of what civilians may expect of production after the war, and not an exhibition of "war babies" for current use. The majority of the exhibits are finished products, based upon research which has been expedited to meet wartime requirements. A few others are shown as examples of work now in progress.

PERSONALS

Gaetano Cecere, sculptor, and former director of the sculpture department of the Beaux Arts Institute of Design, New York, has been appointed instructor in the sculpture classes at the School of Fine Arts, Washington University, St. Louis, Mo., for the coming winter session. The Beaux Arts sculpture classes have been closed for the duration.

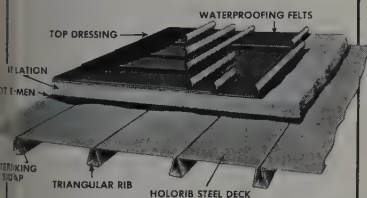
John P. Thomas, Architect, 27 West St., Portland, Maine, who has been in the Navy on active duty since May, 1941, has closed his offices for the duration.



THE

HOLORIB

COMPLETE ROOF UNIT



Designed to give sure and economical protection against (1) Leakage of water; (2) Leakage of heat; (3) Leakage of dollars for maintenance. On the strong steel base is placed its middle stratum composed of pressure resisting insulating sheets which prevent heat loss. Its outer surface is long-lived waterproofing, designed for permanent protection against leakage. These component parts are bonded together and waterproofed by moppings of roofing asphalt, and further secured by Holorib Expanding Nails. Thus united, they form a complete roof, permanent, proof against weather, fire or rot.

FASTER WINTER BUILDING *with Holorib!*

In this second WINTER of WAR the demand to "get under roof" faster will be more urgent than ever. And since roofs, more than any other part of new War Plants, determine when production will start, the faster built roofs will have first call.

Whenever speed is a "must", Holorib meets the crisis 100%. It is ideal for winter construction... can be laid during the coldest weather... any time when men can work. There's nothing to pour, nothing to freeze... and, besides, no waiting for wet materials to dry.

Holorib is easily laid as fast as the structural steel is erected. Holorib's

light, strong sections are put in place in a jiffy and as speedily welded to the purlins. It saves structural steel because it's so light in weight.

Holorib roof deck provides an ideal foundation for the application of insulation and waterproofing as shown opposite. How the Holorib complete roof unit saves first costs of construction, saves fuel in winter, protects against summer heat, saves insurance and gives long service with a minimum of maintenance, are a few of the advantages covered in the new Fenestra Holorib Catalog... copies sent upon request.

Fenestra HOLORIB

Detroit Steel Products Co.,
3111 Griffin Ave., Detroit, Mich.
☐ Please send me a copy of the Fenestra Holorib Catalog.
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Firm _____
Address _____
City _____ State _____

PRODUCTS PROGRESS

(The columns of this section are open to any manufacturer who has a new product of interest to the architectural profession. Manufacturers who wish to have their product shown should send a glossy photograph, together with information covering the function, characteristics, installation, cost of the product, and a description of what A.I.A. literature is available.)

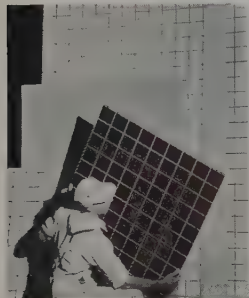
PORTABLE GLASS BLOCK WALL Owens-Illinois, Toledo, Ohio



Packaged interior partition made of glass block fitted together with prefabricated boards. No nailing or other fastening used, once framed opening is

prepared. Wood strips interlock with blocks, fit into fluting on edges of blocks. Notched ends of vertical moldings interlock with horizontal moldings. Panel locked in place by wood wedges at ends of each course.

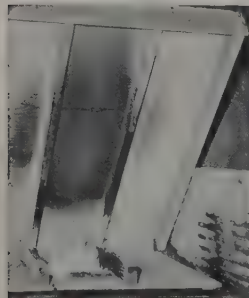
PLASTIC-FINISHED PANELS Marsh Wall Products, Dover, Ohio.



Low - priced wall panels for war construction — even for temporary buildings. Standard thickness is $\frac{1}{8}$ ". The panels may be kept clean with a damp cloth, are res-

istant to acids, scuffing, alkalis, other common deteriorants. Sizes: 4'x4', 4'x6', 4'x8', 4'x10', 4'x12'. Seven colors. Standard size panels cover up to 48 sq. ft. of wall area. Minimum quantity—5,000 sq. ft.

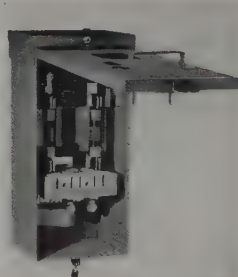
FIRE RETARDANT Albi Co., 9 Park Place, New York.



Firepel is an aqueous solution of fire retardant chemicals, applied by brush or spray to unfinished wood surfaces. Treated wood will maintain its

fire retardant properties indefinitely when not exposed to weather. Photo shows, after $2\frac{1}{4}$ minutes, Firepel action on panel ignited by 3-lb. incendiary. Panel was scorched over half its area, but ignition did not occur.

SWITCHES FOR MARINE USE Square D Co., Detroit, Mich.



New shock-proof and drip - proof switches for naval and marine use. Features: switch blade hinge jaws eliminated to save copper; barrier arrangement prevents fuses from vibrating out of contact; small switches permit smaller mounting space. Units have standard 250-volt fuse spacings. Available for 2-pole, 250-volt D.C. or 3-pole, 575-volt A.C., 30-100 amps.

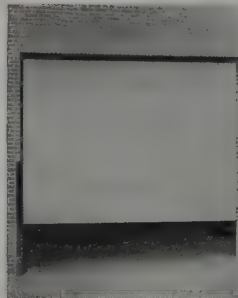
TOOLMAKER'S COMPASS Ithaca Instrument Co., Ithaca, N. Y.



A new instrument for metal workers and draftsmen, designed to overcome the difficulty encountered attempting to scribe small circles. Tilting compass device makes

it possible to draw an ellipse or to blend curves with tangents when the center is slightly out of position. Comes in durable case with scribing needle, pencil adapter, and lead supply. Price—\$10.

WOOD ROLLING DOOR Kinnear Mfg. Co., Columbus, Ohio



This wood rolling door incorporates the same upward - operating principle used in the firm's steel rolling doors. Wood slats are jointed together by means of metal

tapes or cables. The door travels in heavily-constructed wood guides, and coils overhead upon a barrel in which are helical springs for counterbalancing. Operation: manual, chain and reduction gearing, or motor.

PLASTIC-COVERED CLOSET SEAT Brunswick-Balke-Collender, Chicago.



The Onyx toilet seat is made with a laminate hard wood core, covered with a thick molded cellulose acetate plastic. The laminate core prevents warping or

cracking. The covering is moisture proof and acid resistant. The seat may be equipped with check hinges, spring hinges, or self-sustaining hinges. Four models, including Navy troop type. Easily cleaned with soap, water.

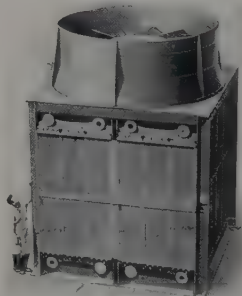
PLASTIC-WIRE MESH PANE Monsanto Chemical Co., Springfield, Mass.



This new type window pane consists of standard, 16-mesh wire screening sandwiched between two sheets of transparent cellulose acetate sheeting and can be

installed in any conventional, multi-paned steel or wood sash. Panels are drawn with a quarter-inch flange which can be fastened to wood sash with a stapler; puttied to form a weather-tight installation.

COOLING MACHINE Young Radiator Co., Racine, Wisc.



The new Quad atmospheric cooling unit is formed into a 4-sided assembly, the sides of which are comprised of heat transfer surface for cooling and condensing. An induc-

draft draws air through the heat transfer elements, discharging it upward. With the Quad, it is possible to cool a Diesel engine of 2000 hp. capacity at a horsepower expenditure of under 25 hp., according to Young engineers.

EXTERMINATE THE NOISE DEMONS



... with low-cost ceilings of
Armstrong's Cushiontone

"**Q**UIET" SIGNS don't mean a thing to noise demons! That's why it's good design to trap these nerve-wreckers—so they can't disturb patients and distract members of the staff. And the efficient, economical way to do that is to install ceilings of Cushiontone.

In each square foot of this new material there are 484 reasons why noise demons are eliminated—484 deep holes which absorb up to 75% of the sound that hits its surface. What a difference that makes!

Armstrong's Cushiontone is factory-painted and ready to apply. Its 12" x 12" and 12" x 24" units are quickly and easily installed to any ceiling, with hardly any interruption to routine. Maintenance is simplicity itself, for Cushiontone is readily cleaned and can be repainted without affecting its noise-quieting efficiency. The smooth, ivory-colored surface reflects light unusually well.

OUR NEW BOOKLET gives all the facts. Write for your copy today. Armstrong Cork Company, Building Materials Division, 1227 State Street, Lancaster, Pennsylvania.



Armstrong's Cushiontone

Made by the
Armstrong's Linoleum



makers of
and Asphalt Tile

Why take 3 pecks when you can have a bushel? . . .



There are many floor materials to choose from, and of course some are better than others. But there's only one . . . its name is Nairn linoleum . . . that gives you *all four* of these basic specifications for a truly modern floor:

1. EYE APPEAL— Unequaled beauty and comprehensive variety of color provide the broadest possible freedom of design. Patterns are Color Correlated—not only with each other—but with other decorating materials as well.

2. LONGER WEAR— Nairn linoleums not only meet, they *exceed* U. S. Government specifications on *every* point. That's built-in ruggedness that spells long-range economy.

3. RESILIENCE— Quiet, "foot-easy" Nairn floors are sound-absorbing, sound-deadening.

4. CLEANLINESS AND EASY MAINTENANCE— One-piece construction leaves no dirt-catching cracks and joints . . . reduces maintenance time and cost to a minimum. Positive germicidal properties. No splinters! No "dusting"!

In short, Nairn linoleum—because it provides *all four* of the basic floor requirements—gives you 100% value on the dollar. In these times, when expenditures must be made carefully, why take less?

ALSO—SPECIAL ADVANTAGES IN NAIRN WALL LINOLEUM!

Actually, it lasts as long as the building. And it will never crack, discolor, fade, stain, or dent. A wide range of patterns—Color Correlated with Nairn floors! Nairn floor and wall linoleums are fully guaranteed when installed according to specifications.

FREE—200-PAGE BOOK of installation aids and specifications—for architects, contractors, builders. Write on your letter-head to Congoleum-Nairn Inc., Kearny, N. J.

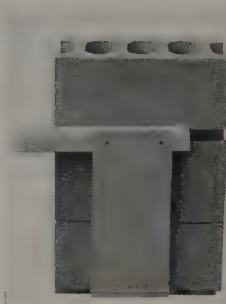


Balch-Elliott Hospital, Manchester, N.H., uses Nairn linoleum in corridors for its sanitary, easy cleaning properties, foot quiet, long wear—and warm rich color effect.

NAIRN LINOLEUM
FLOORS AND WALLS
Reg. U. S. Pat. Off.

BLOCK CONSTRUCTION

P. H. Longhurst, Bearinger Bldg., Saginaw, Mich.



New cement-cinder block method of construction, said to reduce cost of frame construction 25-50%. The slanted slot along the block receives a similarly-shaped piece of wood to which the wall surface is then nailed. Air space created by the blocks of wood can be adjusted to accommodate plumbing fixtures, pipes, or wiring, provides insulation and avoids dampness. Not yet in commercial production.

LINING FOR CONCRETE FORMS.

U. S. Rubber Co., Rockefeller Center, New York.



Hydron is an absorptive lining for concrete forms. By removing water and air bubbles from the surface of the concrete, Hydron is said to produce a concrete that is resistant to weather and abrasion, and has a smooth finish without brushing or scraping. The linings faced with a fabric, are applied to forms by stapling. Hydron is light, easily handled, and flexible for curved surfaces.

MIRROR-SHELF IN WAR HOMES.

Pittsburgh Plate Glass Co., Pittsburgh, Pa.



To meet the needs of a large, transient population resulting from the war, Pittsburgh has developed this inexpensive lavatory mirror and shelf combination for use in war homes, trailers, Army barracks. It comprises a 14" x 18" mirror, on the bottom of which is attached an angle of Hercules that serves as a shelf. The product also is adaptable for use in more permanent homes. Priced to sell for less than \$10.

INTERCHANGEABLE SIGNALING UNITS.

Schwarze Electric Co., Adrian, Mich.



A new system of interchangeable signals for industrial use which may be plugged into uniform adapter plates in such a way that they may be changed without tearing out the electrical installations. Thus, a smaller bell may replace a large one, a horn may replace a bell, etc., simply by replacing equipment in the uniform fixtures. This system, called the Vni-Pact, is said to provide a variety of signals.



An Army Travels on its Ammonium Sulfate

Did you think we were going to say "An army travels on its stomach?" Well, it's the same thing.

Many of the essential chemicals used by farmers in raising plants and animals are derived from coal.

One of the fundamental needs of the farm is nitrogen. It produces bigger yields and better qualities.

When the First World War started, the shortage of imported nitrogen made it difficult to get good fertilizers. Today, large supplies of nitrogen are obtained from ammonium sulfate recovered from the coal carbonized in Koppers coke ovens.

Koppers serves the farmer and the food industry in many other ways.

Fruits are often destroyed by diseases caused by fungi, or by dropping before ripe. Diseases of fruits are prevented by Koppers Flotation Sulfur. The premature dropping of unripe fruit is being prevented through the use of synthetic plant hormones made from naphthalene of which Koppers is a major producer.

Koppers built the first large American plant for recovery of ammonium thiocyanate, an essential raw material in the production of complex organic thiocyanates for insecticide manufacture.

Farmers control animal parasites with coal tar products . . . they get their products to market on roads built of coal tars . . . they prevent decay and destruction of wooden farm structures through the use of lumber pressure treated with Koppers creosote . . . they use Koppers American Hammered Piston Rings in many farm vehicles.—Koppers Co., Pittsburgh, Pa.

Buy United States
War Bonds and Stamps

KOPPERS

THE INDUSTRY THAT SERVES ALL INDUSTRY

Workers in our Bartlett Hayward Division are now privileged to wear the Navy "E" and Maritime "M" emblems.



LET'S TALK

Horse Sense

about the Buildings of Tomorrow

EVERY building material has its place in architectural design and engineering. But Steel provides a *combination of qualities found in no other material.*

Steel is strong and tough . . . high in strength to weight ratio among building materials . . . fireproof and verminproof . . . extremely versatile . . . inherently long in life . . . easily workable . . . and low in cost, considering its advantages and years of performance.

Steel has and always will have a very definite place in all types of buildings—in which the use of less efficient materials must mean sacrifice of many important qualities.

After we've won the war and steel again becomes available in ample quantity for building construction, Republic will be ready as in pre-war days with the most complete line of steels and steel building products made by any single manufacturer.

And through the added experience gained in producing millions of tons of fine steels for armament—through constant research to improve steels and steel products—the Republic line described in Sweet's Catalog File will materially contribute to the design and construction of structures that will be better and lower in cost than ever before.

For information see Sweet's 13/6 for sheet products; 27/3 for pipe; 9/1 and 21/2 for Berger lath, lockers and other items; 23/5 for electrical raceway; 15/18 for Truscon products.

REPUBLIC STEEL CORPORATION • General Offices: CLEVELAND, OHIO

Berger Manufacturing Division • Culvert Division • Niles Steel Products Division
Steel and Tubes Division • Union Drawn Steel Division • Truscon Steel Company
Export Department: Chrysler Building, New York, New York

REPUBLIC STEELS
and STEEL PRODUCTS

THEY SAY

"History is merely gossip."
—Oscar Wilde

—That the steel and reinforced-concrete emergency specifications are the forerunners of others in the building field which will cover such things as wood and masonry construction, electrical work, etc. In many cases the emergency standards can be expected to overrule local codes and customs.

—That Army construction, which alone has totaled \$9,000,000,000 between August, 1940, and September, 1942, is almost through. However there will be some additional housing and air field construction, perhaps a few additional factories, and miscellaneous items.

—That an interior paint which can be packed as a dehydrated product, in cardboard, has just been developed.

—That price regulations for the construction industry have met stiff opposition, or they would have been issued on the scheduled date—around October 1. Apparently strong union pressure for acceptance of July labor rates as against March material prices is one difficulty.

—That even though Congress has just authorized \$600,000,000 worth of war housing, the lumber shortage may curtail it.

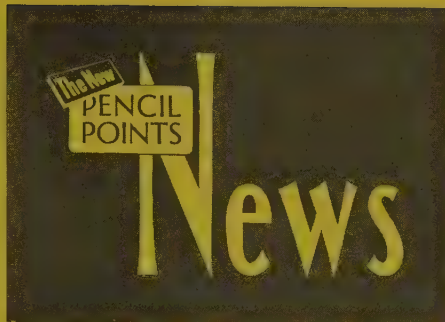
—That the efficiency with which welding has been employed to repair damaged heavy equipment—an inevitable result of war emphasis on speed—may help to impress on those who build after the war the value of welding for building construction.

—That a Western Union boy delivering a message in Washington's new Pentagon Building got lost in its 72 miles of corridors; when he emerged he was a Lt. Colonel, Ordance.

—That fuel oil rationing is going to create a lot of amateur air conditioning experts and heating engineers. Even the rationing boards cannot always comprehend the complex rationing formula.

CHAMBERLAIN IN ARMY

Samuel Chamberlain, noted architectural photographer and delineator, is now a Captain in the United States Army Air Force. He reported for duty on October 1.



Published as a supplement to THE NEW PENCIL POINTS

NOVEMBER, 1942

CONSTRUCTION FACES MORE CUTS

\$16,000,000,000 in CONTRACTS AFFECTED BY NEW WPB ORDER

Washington—WPB ordered, on October 21, drastic overhauling of non-essential construction programs. The move, intended to conserve and divert to war purposes the nation's manpower, materials, and transportation facilities, seriously affects some \$16,000,000,000 worth of construction scheduled for 1943 completion. Hospitals, public works, schools—possibly even war housing projects—are to be closely scrutinized, and if not essential to the war effort, denied authorization. Even war plants will be reviewed again before materials are allotted. These curtailments are expected to release substantial quantities of metals to expand production of ships, planes, tanks, and guns.

1,320,000 DWELLING UNITS

"REAL ROOFS BY CHRISTMAS" SAYS FPHA

Washington, D. C.—The Federal Public Housing Authority has announced that all war housing projects will in the future have to conform to provisions of the Lanham Act in making payments to local Governments in lieu of taxes.

Trailers, permanent, demountable housing

Herbert Emmerich, FPFA Commissioner, announced early in October that he expected all war workers who are living in tents, shacks, or similar dwellings to have real roofs over their heads by Christmas. In addition to permanent and demountable housing programs, trailer projects and a homes utilization program are in progress.

The trailer program consists of some 16,000 units in 85 different projects, as of September 1. It was first developed by the Farm Security Administration and later incorporated into FPFA's war housing program.

Homes utilization program

The homes utilization program is to be the work of a new division of NHA which is to be directed by Frank C. Bane. Its

purpose is to find houses capable of accommodating more persons in war industry areas and to facilitate remodeling work. Suitable houses now unoccupied or occupied by only a few persons will be leased by the Government and remodeled at its expense to house war workers for the duration. After the war the dwellings will be returned to their owners.

FPFA estimates that beginning January 1, 1943, 1,320,000 dwelling units will be required for war workers. Existing structures are expected to provide 650,000 of these, private builders 270,000 new dwellings, and the remainder has been assigned to FPFA. The FPFA program will include 205,000 family units and 195,000 dormitory apartments for single workers. As of September 11, 426,331 dwelling units have been assigned to FPFA. Of these 145,929 were completed and ready for occupancy, 169,963 were under construction, and 110,439 were in a "preconstruction" state.

The greatest housing shortages exist in San Diego and Richmond, California; Seattle.

Two Boards Pass on Projects

The order is to be administered by two new boards of review, which supplant five boards, dispersed among various Federal agencies and departments, which formerly passed upon construction. New boards are the Facility Clearance Board, which WPB Vice-chairman Ferdinand Eberstadt heads; and Facility Review Committee, headed by Col. Gordon E. Textor, Army engineer associated with WPB. Textor's committee reviews all construction project applications and passes judgment on those costing less than \$500,000. The

continued on page 4

NEW HOUSING STANDARDS

WPB has just issued "War Housing Construction Standards" and temporarily halted priorities for new privately financed war housing and remodeling until further notice. The standards forbid single family houses and require masonry exterior wall construction. Maximum floor areas are set as follows: one-story building, 560 sq. ft. (1 bedroom); 720 sq. ft. (2 bedrooms); 900 sq. ft. (3 bedrooms); 340 sq. ft. (no bedroom); larger areas for multi-story buildings.

continued on page 4

THE HOUSE OF 194 Y?



KITCHEN SINK



BATH

DESIGNED for a New York efficiency expert, this delightful one-room house was remodeled from an old commercial garage which stood high on the Jersey Palisades, overlooking the busy railroad yards, the Hudson River, and New York's skyline.

Outside and inside, the house is modern. The interior has a concrete floor, and plywood walls, ceilings, and furniture.

But inside, one meets with a great surprise: *everything* is in one room! And the owner had a great love of antiques, as well as a passion for efficiency.

So, in making the one huge room a combined bedroom-bath-living-room-dining-room-kitchen, antiques were put to modern uses. The dolphin fountain becomes the kitchen sink. The brick pool in the center of the living room floor does double duty as a bathtub. The fireplace has a high brick cheek-piece into which the kitchen range is built.

And, crowning touch, the outdoors is most successfully brought into this one-room paradise. Not only does the glass wall admit the view; it lets in sunlight for the plant bed built into the floor. Not only is the pool a bathtub; up to it leads a flagstone walk, on its curb sit potted plants, and in its placid waters float replicas of wild ducks, which have perhaps sought refuge from a stormy life.

RANGE





Richard Garrison

PERMANENCE FOR MURALS

BUELL MULLEN, metal muralist, impressed with perishability of canvas, prefers to paint upon gold, stainless steel, or any metal. These murals, she believes, should last a millennium. Areas to be painted are prepared by incising—paint is durable—technique has been thoroughly tested. Above are two examples for the Great Lakes Naval Training Station, painted on 20-ga. stainless steel and donated by one of the contractors who built the station. Neptune, at left, dedicated to Admiral John Downes, symbolizes the Navy's domination of the

oceans; Zeus, at right, dedicated to Captain Ralph D. Spalding and his Public Works Division, symbolizes naval air supremacy; Zeus sows the seeds of aviation. Each is five ft. wide, seven ft. high. They commemorate the outstanding achievement in rebuilding the Station.

Previous works of Buell Mullen include portraits and murals for The U. S. Naval Academy, Library of Congress, and many others. For those who worry about the metal involved, all the murals she has painted required not enough steel to make 2½ sq. in. of armor.



Navy Photo

NAVAL HOSPITAL

THE NATIONAL NAVAL MEDICAL CENTER, at Bethesda, Md., was first occupied in February 1942; all permanent structures now planned will be completed about January 1, 1943, according to the Navy Department. Included within the Center are a Naval Medical School, Naval Dental School, Naval Hospital and Naval Research Institute. The Hospital is now running almost to capacity. Rear Admiral C. W. O. Bunker (MC), USN, is the present Commanding Officer.

WOOD NOW CRITICAL

Washington, D. C.—WPB surveys, conducted by the Department of Agriculture, reveal that wood is now a critical material. Since Pearl Harbor the large volume needed for Army and Navy construction, and for replacing other critical materials, has produced a shortage, particularly of woods used in veneers and plywood for aircraft, subchasers, mine sweepers, torpedo boats, etc. Increased harvesting and more efficient methods of lumbering cannot satisfy the demand.

PRIORITIES DENIED ARP

Washington, D. C.—War Production Board has denied preference ratings, except in special cases, to any plant requiring critical materials for air raid protection. WPB said, "The possibility of occasional bombing cannot be allowed to curtail unnecessarily the flow of critical materials to plants making vital military items." It was reported that demands for blackout and air raid equipment and facilities have greatly increased.

CONSTRUCTION

continued from page 1

Eberstadt board judges more costly projects.

Nelson says: War Needs First

Mr. Nelson stated that present war production programs might be forced dangerously behind schedule if civilian production were allowed to continue at its present rate. Federal agencies must also abide by the WPB directive. At the same time WPB warned that violators of conservation order L41 (stop building) would be turned over to the Department of Justice for criminal prosecution.

1,320,000 DWELLING UNITS

continued from page 1

Washington; Portland, Oregon; Buffalo, New York; Bridgeport and New Britain, Connecticut; Portsmouth, New Hampshire; Charleston, South Carolina; Gadsden, Alabama; and Willow Run, Michigan.

Mobile, Alabama, is another sore spot. War activities here have increased the population of the Mobile area from 80,000 in 1941 to 115,000 at present; by January 1, the total is expected to be 200,000.

War workers to be billeted

Washington, D. C.—The Government, through NHA, has announced its intention to secure adequate housing for war work-

GROPIUS, WAGNER EXPECT FUTURE PLANNING TO RELIEVE CONGESTION

Walter Gropius and Martin Wagner, noted architects, when interviewed recently, envisioned a postwar America in which urban congestion will be relieved by planning new townships for about 5,000 inhabitants each, ranged along a network of super-highways and consisting of low cost prefabricated houses. They explained that city slums could thus be cleared and that establishment of small factory and residential towns surrounded by individual farm belts would inaugurate a new era for factory dwellers.

Michigan Bulletin criticism

They suggested that such municipalities could be built by some sort of Government-supported "resettlement corporation." The Michigan Society of Architects' *Bulletin*, in quoting this program, points out that the population of many large and medium-sized American cities has in the recent past been moved out into suburban developments, and that Gropius and Wagner apparently would like to speed up this movement.

The *Bulletin* also calls attention to the possibility that intended beneficiaries of such a program might not be as enthusiastic about it as its sponsors; it also questions the assurance that all or even most of the people in our metropolitan industrial areas would relish the idea of being transplanted to "made-to-order communities." (*Editor's Note—What is the typical suburban real estate subdivision but a "made-to-order" development?*)

GEORGE MAYER ON CLEVELAND PLANNING COMMISSION

Cleveland, Ohio—Mayor Lausche of Cleveland has just appointed a new city planning commission which operates under new authority. Ernest Bohm, Director of Cleveland's Metropolitan Housing Authority, is chairman; other members are Walter Flory, chairman of the special committee on city planning; George B. Mayer, architect; and Lucia McBride; Norman L. McGhee; Peter Slach; and Robert Weaver. The new commission is expected to start immediately on plans for widening Cleveland streets.

EMERGENCY SPECIFICATIONS FOR REINFORCED CONCRETE

Washington, D. C.—National Emergency Specifications for reinforced concrete design have been established by WPB. Allowable compression unit stresses have been reduced, thus requiring larger structural members. The result is substantial reduction in the amount of reinforcing steel needed.

Further economies result from a mandatory increase in tensile stress to 20,000 pounds per square inch for structural grades of steel and to 24,000 for intermediate and hard grades. The net saving is expected to be about 25%, or 150,000 to 250,000 net tons of steel per year.

AIR RAID RECONSTRUCTION PLAN FOR MASSACHUSETTS

Boston, Massachusetts—The Commonwealth of Massachusetts last week considered recommendations for raid damage repair, submitted by its Committee on Postwar Readjustment. The proposal contemplated forming a rehabilitation board composed of the Commissioners of Public Works and Public Health, the Chairman of the State Planning Board, and two members at large.

Procedure would be about as follows: if a city were raided an executive order would be issued forbidding rebuilding any structures for 90 days unless the public interest required quicker action. During this period, the rehabilitation committee would study the problem, prepare plans for improvements deemed advisable, and set dates for issuing building permits.

EVACUATION HOSPITALS

St. Louis—The American Hospital Association was informed of plans for hospital evacuation in case of bombing attempts along our coast. Marshall Shaffer, architect for the United States Public Health Service, reports that designs for evacuation hospitals are being prepared by Government architects.

These buildings are tentatively designed as series of one-story pavilions, 50 feet apart and connected by corridors. Each series is intended to accommodate 1,000 persons. If need arises such evacuation units can be built far from coastal areas. The scheme is based on a similar program widely used in Great Britain.

STEEL RESEARCH

Colorado Springs, Colorado—F. H. Frankland, Director of Engineering, American Institute of Steel Construction, has reported to the Institute on research into structural problems. These deal with the behavior of steel columns, the possibility of preparing specifications for semi-rigid connections, the value of stiffened plates, possibility of using perforated plates as compression members, and tests on rigid framing members.

The specifications for semi-rigid connections will be tentative for several years, until more exact data has been accumulated. It is expected that this type of framing may result in the use of smaller quantities of steel and thus lower the cost of steel construction to figures comparable with other structural materials.

Jonathan Jones of Bethlehem Steel Company reported on specifications for welding structural steel. The specification is set up in such a form that all or parts of it can be adopted directly into local building codes.

SEES HOUSING SHORTAGE

New York—Samuel Paul, Architect and member of the faculty at Cooper Union, predicts that prefabricated houses will bulk large in residential construction after the war.

CORRECTION

A paragraph in the October, 1942 NEW PENCIL POINTS NEWS referred to a "Washington architect" as the originator of houseboat housing. We have been reliably informed that use of "pontoon housing" was first presented to housing officials by Zarch Sourian, New York architect.

HERE'S A FLOOR THAT WON'T WEAR OUT ITS *welcome!*

YOU CAN BE SURE that a floor of Armstrong's Asphalt Tile will get a pleasing reception from your clients.

This hand-set, resilient flooring material has beauty—fresh, colorful beauty. But, what is much more important, its beauty will last . . . it is built-in to withstand years of the heaviest traffic. Armstrong's Asphalt Tile is economical . . . in original investment and low maintenance.

No matter where you specify it—in offices, schools, stores, restaurants, or hospitals—a floor of Armstrong's Asphalt Tile will meet every demand your clients put on it. Even on concrete subfloors in direct contact with the ground it can be used safely, because neither moisture nor alkali affects it.

For complete details about Armstrong's Asphalt Tile Floors consult "Sweet's"—or write today for a copy of the free, illustrated book: "Low-Cost Floors with a Luxury Look." Armstrong Cork Company, Building Materials Division, 1206 State Street, Lancaster, Pennsylvania.



WHEN PEOPLE CALL at the Mutual Loan Office, Sioux City, Iowa, they're greeted by this smartly designed, long-wearing floor of Armstrong's Asphalt Tile. Florentine Marble for the field, with interliners of Buff, were selected from the wide variety of colors, shapes, and sizes available. Installed by Sioux City Furniture Company.

ARMSTRONG'S ASPHALT TILE

The low-cost floor  *with the luxury look*

MADE BY THE MAKERS OF ARMSTRONG'S LINOLEUM



What a challenge to tomorrow's builders!

THERE are two sides to every question. In the picture above you see the effects of wanton, tragic, useless destruction. But look further. Doesn't there begin to come to your mind the vision of how you would rebuild—of the light and air and beauty with which you could transform that ugly, crowded waste? Man's greatest claim to hope lies in his eternal urge to build again—and better.

Bombs may never level cities in our own fair land. But the hand of builders will. Vast, crowded areas wait to be reclaimed. Housing may be a puny orphan of the war, but fed by neglect it

will emerge a giant. Sooner or later, the pent-up demand for shelter will break like a storm under a release of materials. Then, you, the creative planner, will come into your own.

And ready to your hand, will come the steel with which to build—stronger, safer, more beautiful. For war's insatiable demands have vastly stimulated research and revealed a whole new range of possibilities.

Forced as you are today by the war emergency to forego its use as fully as possible, there is no barrier to your planning for tomorrow. Steel will be back more plentiful and versatile than ever.

HOW STEEL IS IMPROVING CONSTRUCTION

Faster, cheaper construction. Better war use steels have resulted in buildings being completed months ahead of schedule, with savings in costs.

Stronger, more flexible construction. New methods of fabrication with steel make buildings more resistant to explosions, fire, earthquake, lightning and storms of all kinds.

More durable construction. Steel can be made as corrosion-resistant as you want by proper alloying or surface treatment. U.S.S. Stainless Steel, COR-TEN, Copper Steel, VITRENA, Paintbond, Dul-Kote, Terne plate, Galvalume steel—all have different degrees of corrosion resistance making them suitable for particular jobs.

Better designs in steel. Architects are contributing immeasurably to the better use of steel. Business buildings, factories, homes—not only practical, but beautiful when correctly designed with steel.



CARNEGIE-ILLINOIS STEEL CORPORATION, Pittsburgh and Chicago

COLUMBIA STEEL COMPANY, San Francisco

TENNESSEE COAL, IRON & RAILROAD COMPANY, Birmingham

Scully Steel Products Company, Chicago, Warehouse Distributors

United States Steel Export Company, New York

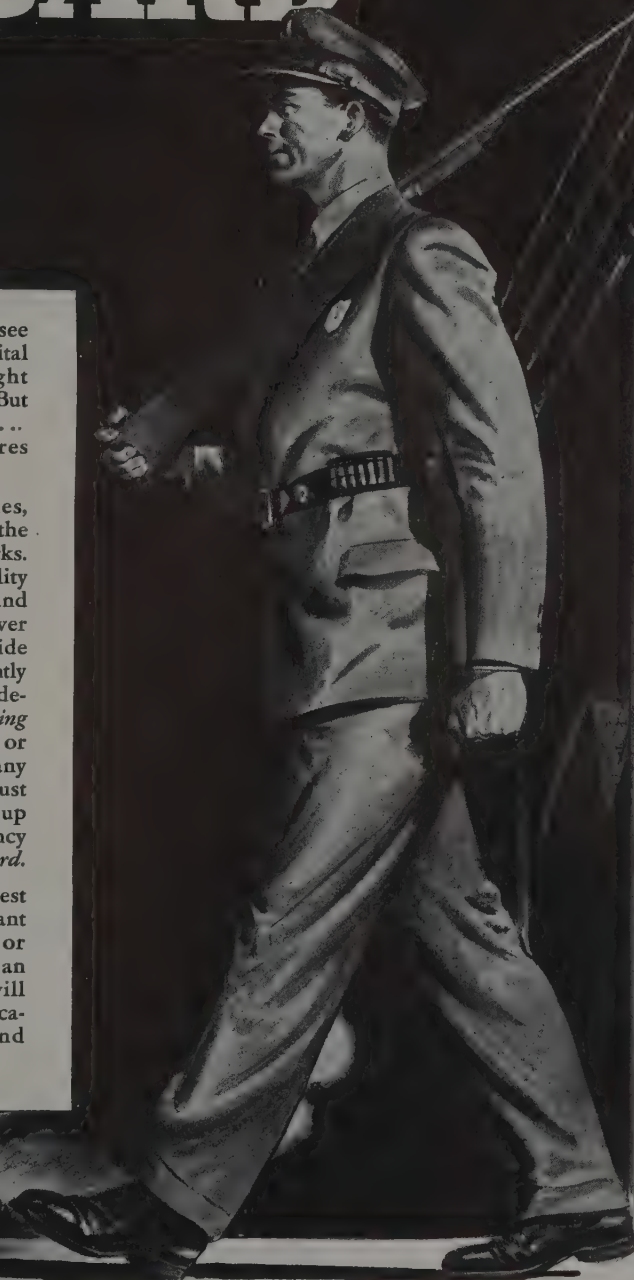
UNITED STATES STEEL

ON GUARD

HERE'S a sight you'll often see today . . . guards before vital war plants, ready to fight sabotage, attack, or spying. But what about the unseen enemy . . . the power and lighting failures which strike without warning?

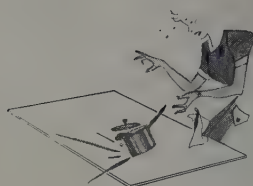
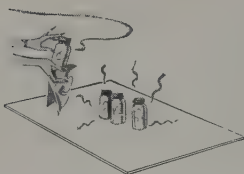
In many American industries, Exide Emergency Batteries are the silent guardians against such attacks. Despite all precautions of utility companies, storms, floods, fires, and street accidents may shut off power and light disastrously. But Exide Emergency Batteries operate instantly and automatically to forestall destruction. They take up the *lighting load* and help prevent sabotage or injury to workers. And in many cases, where a vital process must continue, an Exide Unit can take up the power load. Exide Emergency Batteries are definitely *on guard*.

You, as an architect, can suggest the inclusion of this important precautionary measure. Write or wire the nearest Exide Branch, an experienced Exide Engineer will help you with plans and specifications for standby power and emergency lighting.



THE ELECTRIC STORAGE BATTERY COMPANY, Philadelphia
The World's Largest Manufacturers of Storage Batteries for Every Purpose
Exide Batteries of Canada, Limited, Toronto

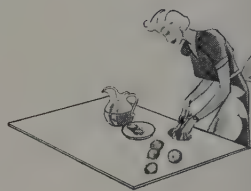
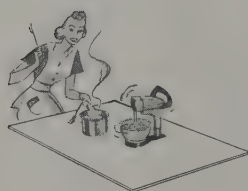
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EMERGENCY BATTERIES



a Libbey-Owens-Ford Product

TEMPERED VITROLITE

comes to the rescue of work surfaces



Many of the materials you have used for work surfaces have been sent to war. So now, in their place we have developed a new and better work surface material . . . *Tempered Vitrolite*.

Our engineers recognized the multiplicity of demands that such a material must serve. Vitrolite combined many of the required characteristics. Its surfaces are smooth, sanitary, nonporous and easy to clean. It is stainproof and resistant to all common acids. It is opaque, made in the purest white or in a wide range of other attractive colors.

One step was necessary to make Vitrolite the perfect work surface for industrial use as well as

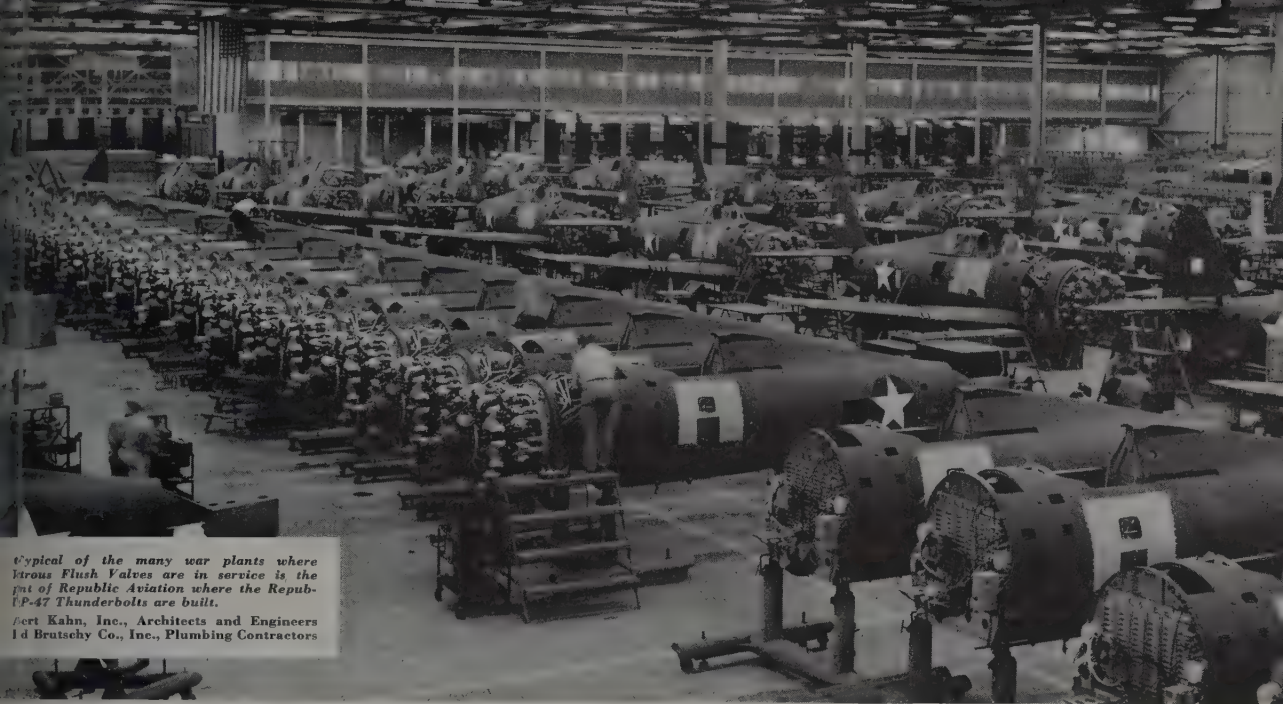
for kitchen tables, cabinets and shelves. By a special process we tempered it and endowed it with an iron constitution. Through this process it becomes so strong that it will support the weight of an average family. It is amazingly resistant to physical impact. It stands thermal shock so well you can place it on a cake of ice and pour hot molten lead on its topside without causing a crack.

Tempered Vitrolite is solid and substantial . . . sanitary and easy to clean. Its surfaces are harder than most metals. Be sure you have complete details. Write Libbey-Owens-Ford Glass Company, 1324-A Nicholas Building, Toledo, Ohio.



LIBBEY • OWENS • FORD

QUALITY *Flat Glass* PRODUCTS



Typical of the many war plants where Watrous Flush Valves are in service is the plant of Republic Aviation where the Republic P-47 Thunderbolts are built.
 Bert Kahn, Inc., Architects and Engineers
 Ed Brutschy Co., Inc., Plumbing Contractors

SO that YOU can help plants like this get EXTRA water, man-hour and power savings from their flush valves

ADVERTISING in these days, as pointed out by the War Production Board, should be informative, factual and of practical value to the reader. And it has been with such considerations in mind that a new educational manual on flush valves has been developed by the Imperial Brass organization. This manual, "Keep 'Em Flushing," has been designed to be of practical help to anyone who has anything to do with the selection, installation or maintenance of flush valves.

As this manual points out, flush valves

already are widely known for their economies—that's one reason why they are used in virtually all industrial plants, cantonments, hospitals and the like.

But there are certain kinks—certain points to watch in maintenance—that will often help get EXTRA savings from flush valves.

In time of war these EXTRA savings are especially important. Water saved means fuel and power saved; maintenance saved or speeded means man-hours saved.

The manual points out that by making

sure that each flush valve is properly regulated to the actual water needs of the fixture, frequently as much as an EXTRA gallon of water can be saved per flush. Importance of such savings over a year is indicated by the table below.

You'll find the manual helpful in your own work and you may wish to pass copies along to the men responsible for plumbing maintenance on projects you have completed. It is a manual especially valuable for use at Army, Navy and Air Bases. We shall be glad to mail one or more copies to you.

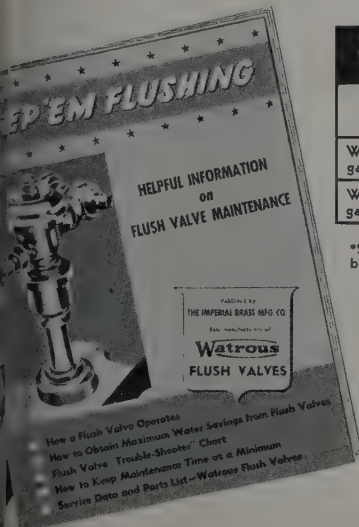
Estimated annual savings of water obtainable through proper regulation of flush valve to actual water needs of fixture*			
	Building with 100 Flush Valves Gallons saved	Building with 500 Flush Valves Gallons saved	Project with 1000 Flush Valves Gallons saved
When average of 1/2 gal. saved per flush	292,000	1,460,000	2,920,000
When average of 1 gal. saved per flush	584,000	2,920,000	5,840,000

*Savings vary somewhat with type of building in which valves are installed.

THE IMPERIAL BRASS MFG. CO.
 541 South Racine Ave., Chicago, Illinois

★ ★ ★

See Catalog 47, Section 27 in Sweets' Catalog File for specification information.

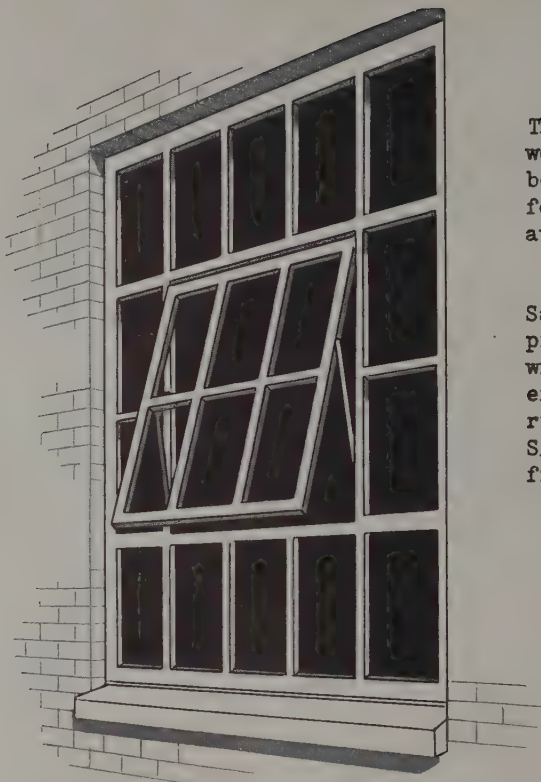


"KEEP 'EM FLUSHING"

With simple diagrams this manual shows how a flush valve operates. Tells how to reduce maintenance time to a minimum; tells how to get "all-out" water savings; includes other practical data.

Watrous Flush Valves

DIAPHRAGM and PISTON TYPES . . . also furnished with SILENT-ACTION equipment



This stronger, neater appearing wood sash has been designed for both old and new construction for which steel sash is no longer available.

Sash and frame are of genuine white pine, 1-3/4" thick, toxic treated with Woodlife. Furnished for either inside or outside glazing. Don't risk delays...specify this NEW PELLA SASH and be sure your jobs will be finished on time.

WRITE FOR FULL SIZE DETAILS

ROLSCREEN COMPANY

Pella, Iowa

WHO NEEDS COMMERCIAL SASH IN A HURRY?



TABLE OF SIZES

Standard units will have glass sizes reduced to maintain standard steel opening sizes. Or, Pella Projected Sash may be ordered with full size glass and a corresponding increase in opening dimensions without extra cost.

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PROJECTED WOOD SASH

Made by Rolscreen Company, makers of Pella Rolscreens, Venetian Blinds, Casements

You can count on

"Pittsburgh" Glass!



PENNVERNON WINDOW GLASS

This quality window glass is being widely used today for glazing homes, both multiple and single unit dwellings. It is also a favorite for war-factory glazing. Pennvernon is famous for its looks, its flatness, and the good vision it affords.



PITTCO STORE FRONT PRODUCTS

First in their field for years, these products can be depended upon by the architect to execute his ideas faithfully and effectively. They provide him with wide possibilities for striking design. Research and development work will make Pittco Products even more useful after the war.



CARRARA STRUCTURAL GLASS

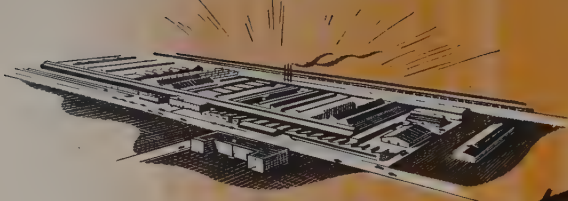
In designing Victory homes, new, prefabricated shower enclosures of Tempered Carrara Glass save time, space, money and metal. Shipped to the job in one package, ready for immediate assembly. Several styles available for various plumbing layouts. Eight colors.

THE "Pittsburgh" Products mentioned here represent but a few of those which are ready to serve the architect in both wartime and peacetime work. Complete information on any Pittsburgh Product will be sent you upon request. And we urge you to call upon us if there is any problem concerned with glass which we can help you solve. Pittsburgh Plate Glass Company, 2131-2 Grant Building, Pittsburgh, Pa

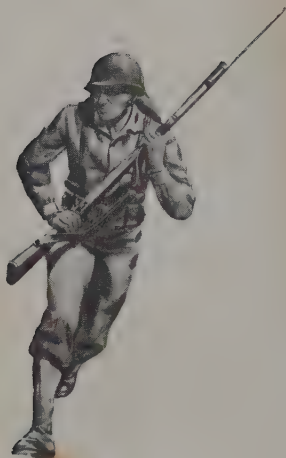
"PITTSBURGH"

stands for Quality Glass and Paint

PITTSBURGH PLATE GLASS COMPANY



Now Truscon turns to wood -



because Steel Windows Have Gone to War!

**TRUSCON PRESENTS
DURA-WAR WOOD WINDOWS**

Steel windows are first choice with architects because they are easily adapted to the requirements of modern factory design. But, today, with the use of steel restricted for the manufacture of windows, Truscon has applied its vast knowledge and experience to the problem of supplying a suitable alternate. The result is the DURA-WAR Wood Window.

The requirements of the industrial jobs now on your boards, and those you will plan until the end of the war, can be met fully with DURA-WAR Wood Windows. They parallel

the types and sizes in the standard line of Truscon horizontally-pivoted steel windows.

Truscon trained sales engineers and erectors are available to give you all necessary DURA-WAR Wood Window information, including cost, erected and glazed, or merely delivered to job site. Prompt shipments! TRUSCON STEEL COMPANY, Youngstown, Ohio, Subsidiary of Republic Steel Corporation.

NOTE: Residential Double Hung Steel Windows and Residence Steel Casements are available for use in construction located in defense areas. The War Production Board has approved their use until existing inventories are liquidated.



Write today for illustrated catalog on Truscon DURA-WAR Wood Windows.

PASS THE AMMUNITION

MAN and boy, during the last thirty years, we have known hundreds of architects, good and bad, young and old, rich and poor. With or without faults they have been, on the whole, proud of their profession, of its accomplishments, of its service to society. Few have become wealthy from the fees they have received; many have derived richness of satisfaction out of the work they have performed.

Through the twenties and even the thirties their numbers grew to an established fifteen thousand, coupled with an estimated twenty thousand draftsmen and designers—approximately one to each four thousand of population. A strong group or a weak one, depending on how you look at it.

Now we are engaged in a great, unprecedented, total war. All available American energies must be devoted to the winning of that war. Architecture, which is an art of peace, has been for the time being thrust aside except for war-needed structures. The utilitarian side of our craft—the engineering and planning only—is in demand.

Architects are told, "We don't want you, we want engineers." They are regarded as mouse-trap makers in a land where mice have suddenly been exterminated. There is wide lack of understanding (contributed to over the years by the profession's own failure to make itself understood) of the fact that the architect is a type of engineer—an engineer PLUS—whose combination of skills and abilities is not duplicated elsewhere. Man for man, measured in intelligence, education, and practical common sense, he is at least the equal of any class of engineers you can name. There's certainly no reason for him to feel inferior.

Yet under the pressure of economic circumstance—which has put him, temporarily at least, in the position of being a job-seeker—there appears a recent tendency for the architect to be forced to hide his identity, to disguise himself, to adopt the protective coloration of some other designation.

We hear of men being advised, when going after employment in war industry or military service, "For God's sake, don't let them know you're an architect." Even A.I.A. headquarters in Washington has in the past given such advice. This may be realistic, but it seems to us shameful.

We hope that after the desperate men who follow this advice get their jobs and have demonstrated that they can do them well they will become bold enough to disclose their secret. Meanwhile, we hope that all will not be like this, that there will be some strong enough and proud enough to declare themselves openly as ARCHITECTS and fight their way courageously, by frontal attack, into the jobs they know they can do—jobs not to do Architecture but to apply the broad capabilities of the trained Architect to analyze, to plan, to coordinate, to get things done right. There must be many such jobs.

Large scale concerted action is needed here, as in the war itself, if the battle is to be won. Leadership is also needed—but where is it?



PEACE CAN GAIN

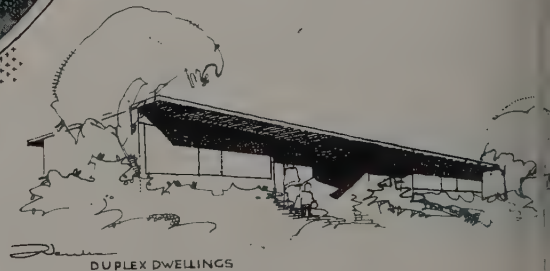
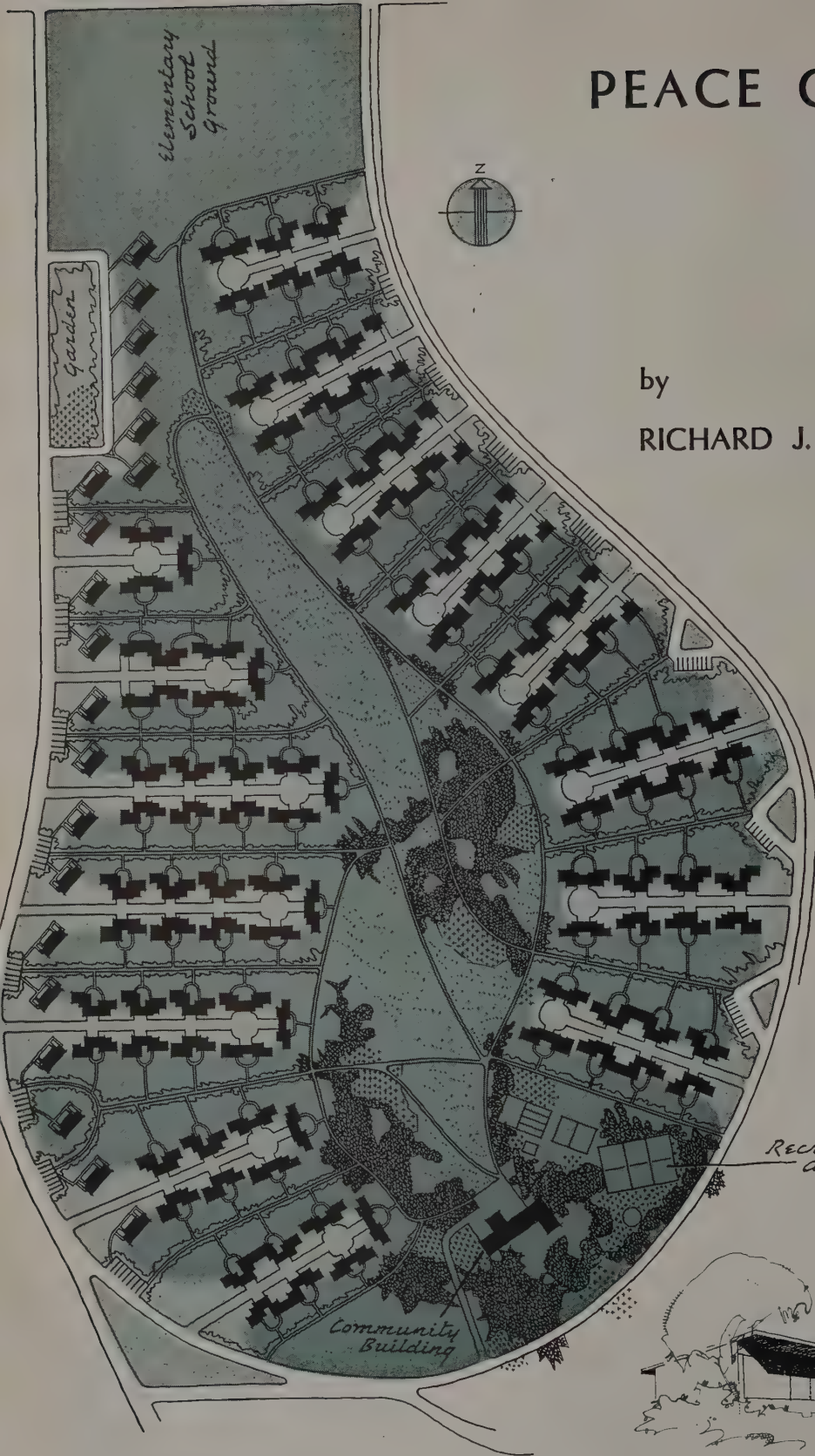
by

RICHARD J. NEUTRA, A.I.A.;

Member,

California State

Planning Board



DUPLEX DWELLINGS

FROM WAR'S FORCED CHANGES



WAR is always a period of quickened obsolescence. Values which may have imperceptibly been sliding out of gear, suddenly become flagrant misfits. Circumstantial pressure produces a new scale of evaluation, new determining forces.

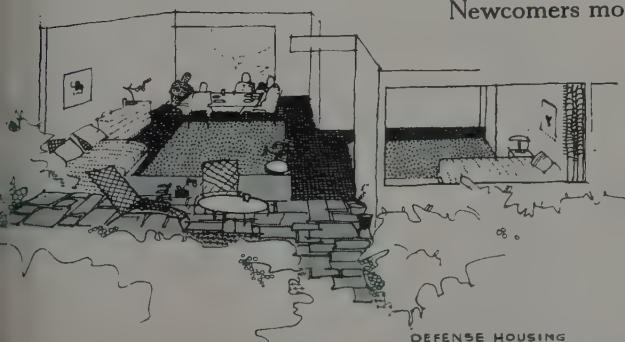
This war, much more than the last one, is upsetting the production, the distributional, and the consumption equilibrium. And no matter how it ends, the end will start an era.

In every way, potential American production—plant, output, resourcefulness — will be vastly increased. The geography of employment and markets is accordingly being shifted within the country at large, and in many of its specific areas.

Green farmhands move into newly-created industries which drain the agricultural labor supply; while old technical skills, as for example those of the ancient building trades, will lose much of their significance when our newly-acquired million dollar tools seek, by re-conversion, employment proper to peacetime.

Large population groups are being uprooted. Many will be transplanted. Purchasing power changes hands. The objects we acquire and the mode of our personal life undergo modifications. Newcomers mold a new ideology.

AVION VILLAGE, war housing community in Texas, for which David Williams, Roscoe DeWitt, and Richard Neutra were the architects, exemplifies one of Neutra's principles: "an extensive communal area, continuous, without interruption by through traffic, and of a layout where all dwellings face this green area . . . fingerparks radiating from a central green . . . houses have park addresses rather than street numbers. Driving and parking of owners' cars, deliveries, housekeeping yards, vegetable gardens, incinerators, and utility lines are all relegated to service courts. . . ."



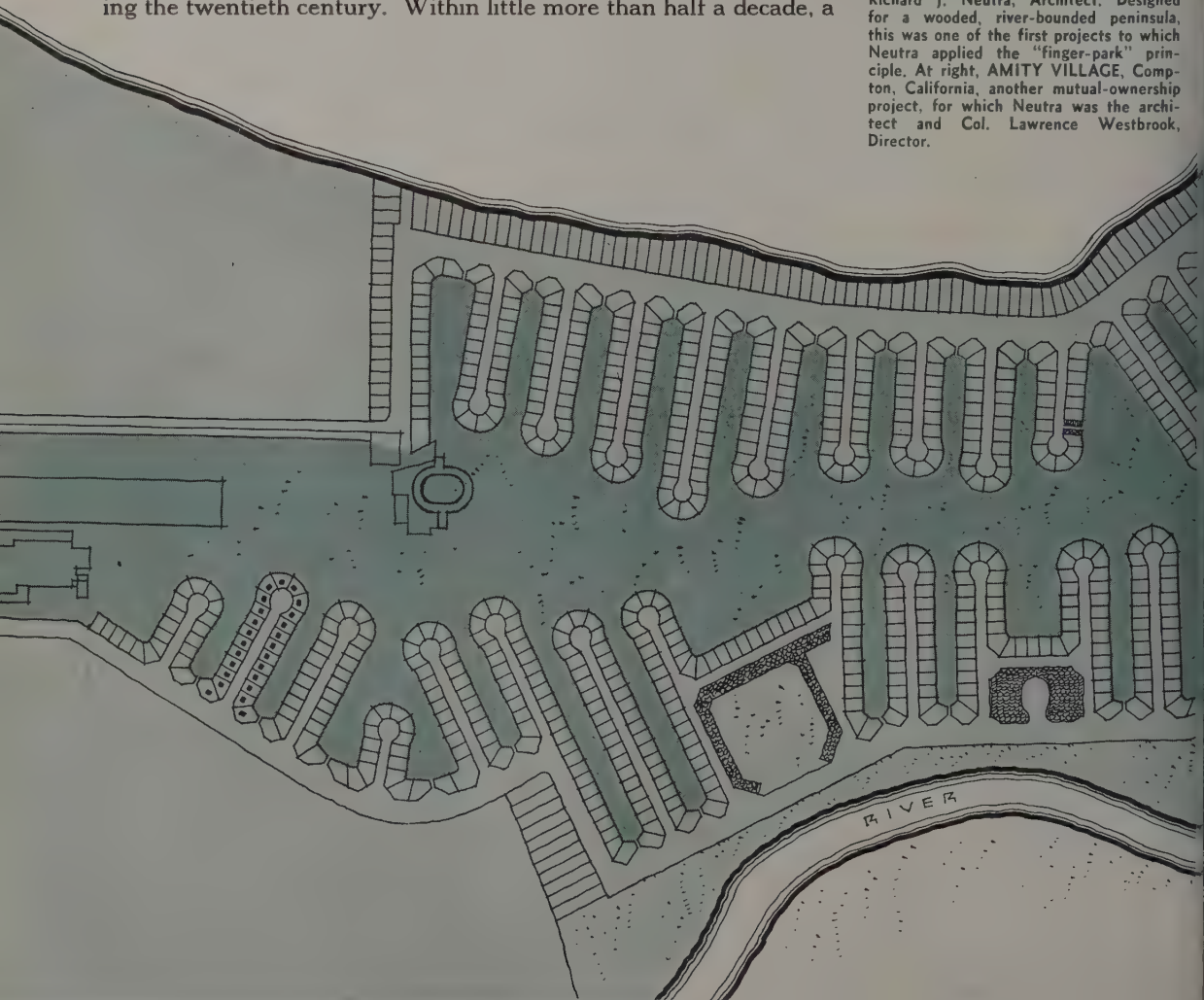
DEFENSE HOUSING
AVION VILLAGE
TEXAS

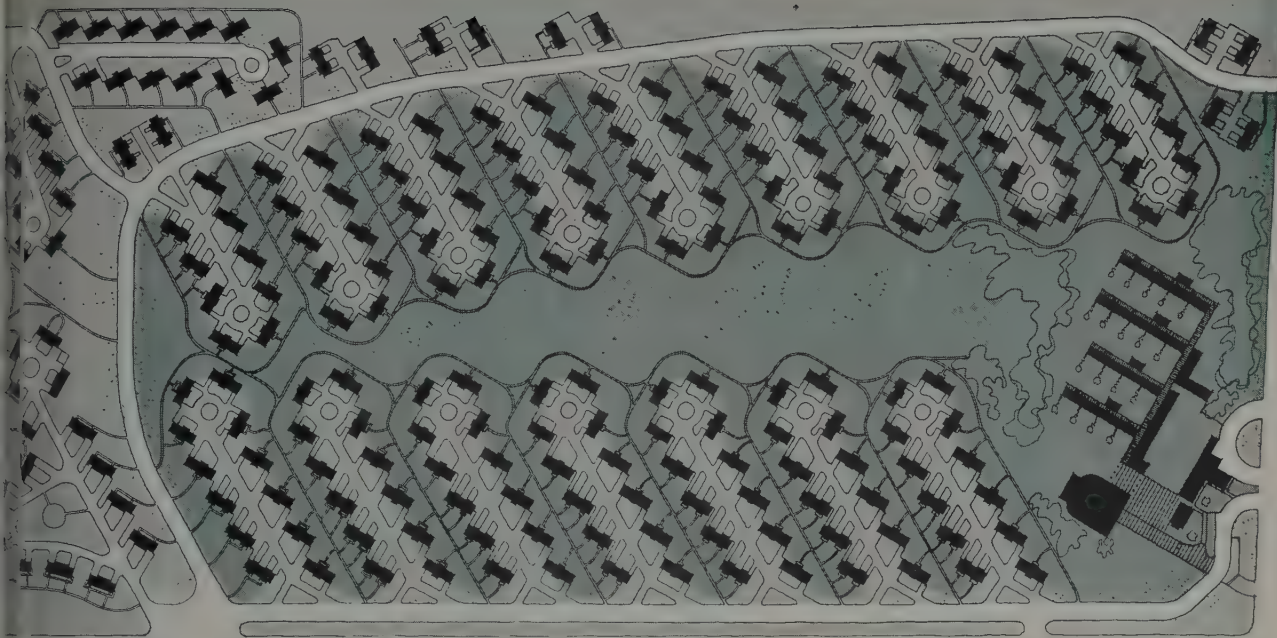
For example: housing, the recognized peacetime work-reserve, of staggering magnitude, will be profoundly influenced by all these factors. There will be no textbooks to re-orient planners and architects in a few easy lessons. All that can be hoped is that attention focused on some modest, too-little-observed side currents and trends of the bygone period may be helpful in articulating the new one, and serve as a usable system of reference and order.

Building design and physical planning, the architectural profession itself, were profoundly vitalized by the last war. Socio-economic viewpoints were adopted, and thrilled the minds of young theorists and incipient practitioners in architecture. I breathed this atmosphere a quarter of a century ago, and enthusiastically labored to add a few vital ingredients to it, through activity in design and in writing. A few erratic blocks, of strange significance amid the complacent Victorian landscape, served us as foundation material: Semper's and Violet le Duc's writings from about 1870; Otto Wagner's and Louis Sullivan's manifestoes and designs after 1890; the essays of Adolph Loos; Frank Lloyd Wright's magnificently stimulating publication of 1911, just before that other bloody contest got under way.

The immediate reconstruction of war damage in Northern France and in Belgium proved less fertile than the rehousing activity in urban centers of the impoverished "loser nations" during the twentieth century. Within little more than half a decade, a

Below, PARKLIVING, a mutual-ownership housing project in Jacksonville, Florida; Richard J. Neutra, Architect. Designed for a wooded, river-bounded peninsula, this was one of the first projects to which Neutra applied the "finger-park" principle. At right, AMITY VILLAGE, Compton, California, another mutual-ownership project, for which Neutra was the architect and Col. Lawrence Westbrook, Director.





miracle was performed: fifteen percent and more of large continental populations was resettled; such accomplishments as those in Vienna impressed the "victor nations" of 1918. Measured by social gains and earnest attempts to reframe environment on a large scale, it would not be easy to state who were the "losers" and who the "winners" of World War I.

People at large were little benefited when, in a speculative spree, a few expensive skyscrapers and modernistic shop fronts were added to the urban congestion and traffic jam of the old order. The best all-around planning was possibly done by the small neutrals, Holland, Scandinavia, and Switzerland, which had neither been drained of national wealth, nor fallen into the intoxication of victory.

A great deal of the coming American postwar work of designing will be in the hands of young men who are at present in the armed forces, in many wartime occupations, in many foreign lands. Right now their outlook is being conditioned to be many-sided, cosmopolitan, unprovincial. Our young Americans will understand as never before their great countryman, Benjamin Franklin, who was so admirably and acutely familiar with both sides of the ocean, and planned for his commonwealth from knowing the world. Thousands of human, social, and factual contacts, not ordinarily experienced in sheltered home towns, are now actually molding the minds of these young men. Wholesale planning and its difficulties are to them an every-day, conspicuous occurrence during this total, global war. Teamwork has spread far beyond the football field.

Life and action in unison were familiar to early American society in the townships and on the commons of New England.



A new public, similarly receptive to it, is again in the making, and a receptive public is as significant as its creative leaders.

A visible expression of this new social cohesion is the springing up of humanly-sized and humanly-framed neighborhoods in the midst of the amorphous wastes of blighted metropolitan areas. Housing projects have been built and have begun to be lived in.

INTER-DEPENDENCE, NOT SUBDIVISION

"Symbiosis" is defined by biologists as the friendly coordination of the life activities of several individual organisms which live not just side by side, but profitably *with* each other.

Quite a contrast to the post-Victorian subdivision, where families lived *parallel* to each other, with the paved street alone representing the community: a hundred thousand American youngsters are now growing up in housing projects, with a living neighborhood spirit under their skin, a spirit well-expressed in specifically-planned surroundings. If we believe at all in the consequential, *in the training* value of well-conceived environment, we have here nuclei around which new and fertile social habits can crystallize.

Ever since Henry Wright, on a trip to Europe in the middle Twenties, became familiar with the ideology of planning—which he splendidly materialized in Radburn, New Jersey, with the co-operation of Clarence Stein, the Bing Brothers, and Herbert Emmerich, now FPHA Commissioner—a living example was in

At left is a model of CHANNEL HEIGHTS, a housing project for workers in the San Pedro, California, shipyards. With modifications due to extremely rugged topography, Neutra's principles were here applied again. Illuminated underpasses give pedestrians access to all parts of the project without causing them to cross traffic arteries. The development thus becomes three-dimensional. Howard L. Holtzendorff was the Executive Director, L. E. Wilson the Consultant, Neutra the Architect.



SAYS MR. NEUTRA on the preceding page: "People at large were little benefited when, in a speculative spree, a few expensive skyscrapers and modernistic shop fronts were added to the suburban congestion and traffic jam of the old order."

The kind of architectural inflation to which he refers is capable of far greater damage than the financial overconfidence out of which it grew. For any building represents not only a sum of money invested, wisely or foolishly; it is an attempt, perhaps unwitting, to exercise control over the daily life—and so the business, recreation, thoughts and character—of the people who use the building. A satisfactory building contributes enormously to its users' welfare. If it is only moderately satisfactory, and nothing better is at hand, it gradually drags its users to its own level. If it is poor, and superior accommodations are available, nothing can keep it tenanted. Such statements are rather obvious.

In showing pictures of two stores and of a street of financial buildings, there is no intention of disparaging them as individual structures. The only complaint is that they ARE individual structures—much too individual. If there had been a chance to integrate them with peoples' needs, if their environment had been less wastefully developed—in short if they and their surroundings had been truly planned—they might have been much more successful.



existence, to be further developed and elaborated. I have myself endeavored to do so again and again during this last decade. However we owe it to these turbulent years and their refreshing unconcern for historical inertia, that now such projects have found realization, and so are bound to breed their postwar offspring of ever-improved, similar projects.

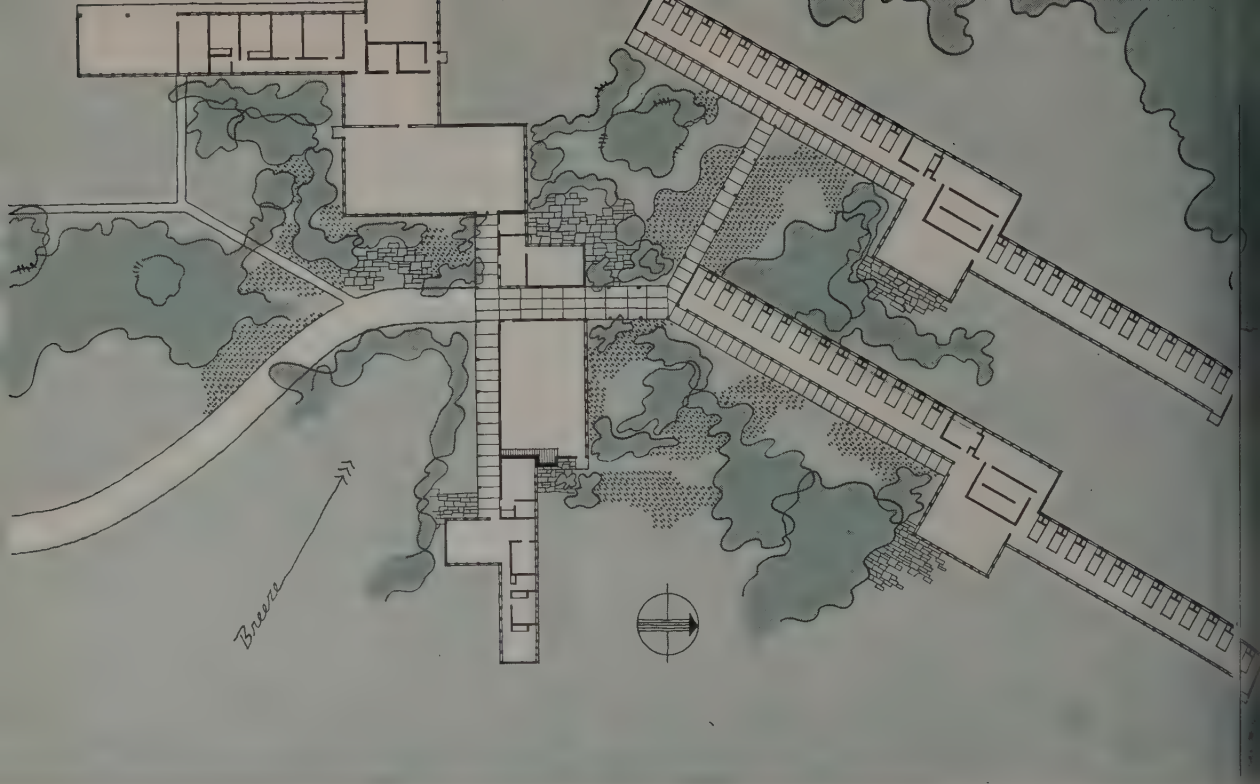
The illustrations show first an example of years ago: the Mutual Ownership Colony, "Parkliving," designed for a wooded, river-bounded peninsula near Jacksonville, Florida. The principle of an extensive communal area, continuous, without interruption by through traffic, and of a layout where all dwellings face this green area, is elaborated in the subsequent site designs for Avion Village, Texas; Amity Village, Compton, California; and, with modifications due to very rugged topography, at Channel Heights, a housing project for workers of the San Pedro shipyards. Here, illuminated underpasses under high road embankments serve pedestrian communication between residential areas and the community building and the various recreational areas, as well as for surface drainage of several deep canyons and ravines. The idea that dwelling units face on finger-parks radiating from a central green area, is maintained. Visitors enter through trellised pergolas onto park walks leading to the houses, which have park addresses rather than street numbers. Driving and parking of owners' cars, deliveries, housekeeping yards, vegetable gardens,

In the Community Building at PUEBLO DEL RIO, FPHA housing project in Los Angeles, the day nursery has sliding doors which permit the room to open generously out onto the nursery's private patio. The architects were Paul R. Williams, Gordon B. Kaufman, Richard J. Neutra, Adrian Wilson, Wurdeman and Beckett.



incinerators, and utility lines are all relegated to service courts, well segregated from frontal parks and community areas.

Communal facilities include playgrounds for children, adolescents, and adults, and extend into the existing adjoining city park with its tennis courts and luxuriant landscaping. The community building includes, besides its wings for administration and for maintenance, inter-connected indoor and outdoor assembly space, rooms and storage compartments for craft activities and materials, a demonstration kitchen, a day nursery with infants' play court, spray pool, sandlot, and other facilities. A special structure, a lathhouse, is dedicated to adolescent and adult training in gardening and landscaping. A community store and market, with departments for grocer, butcher, baker, delicatessen, vegetables, fruits, drugs, shoe repair, and laundry agency, helps to make the project a self-sufficient neighborhood, with provision made for supplying daily needs and a certain nucleus of services. Sites near the plaza are reserved for a kindergarten and a 12-unit primary school, for a health center and a fire station.



NYA YOUTH TRAINING CENTER, Sacramento, California, Richard J. Neutra, Architect and Consultant. Shown in plan above, the community center contains an assembly area, nursery, school, clinic, library, home economics department, and adjoins a school. Dormitory wings are seen to be placed at right angles to the prevailing breeze; the relationship of the whole project

The necessity of suddenly transplanting a population of workers' families near an employment center of equally sudden development has overcome or sidestepped many resistances which, in peacetime, would have blocked the creation of such a center. Yet in such centers can be carried on both training for and experimentation in a promising and socially more satisfactory mode of life.

Young and enthusiastic managers are acquiring the skills needed for handling projects like this, which otherwise would have been impossible to experience. Education of tenants for cooperative management appears as a plausible step, and should likewise have repercussions on the concept, the planning, and the many details of related projects.

Numerous examples—like those produced by the Los Angeles Housing Authority, which serve war and peace through continuous, undaunted effort—have been materialized to stimulate post-war progress all over the country.

WE HAVE LEARNED—BUT NOT ENOUGH

Both tenants as consumers, and designers, contractors and subcontractors as producers, have acquired many a valuable piece of knowledge about the merits and properties of unified design and material selection, as applied to an entire neighborhood. Such a harmonized neighborhood is not *monotonous*. It is much more a *living entity* than is that checkerboard of 500 or 1000 individual lots fronting on 50-foot-wide pavements laid down in a rectangu-



was equally carefully studied, with due regard for site conditions, orientation, traffic and landscaping. The photographs on this page show, at top, the dormitory patio; center, view of the entrance to the Training Center; below, view from the service road, with service entrance at left, mess hall and recreation hall in center, and superintendent's dwelling at right.



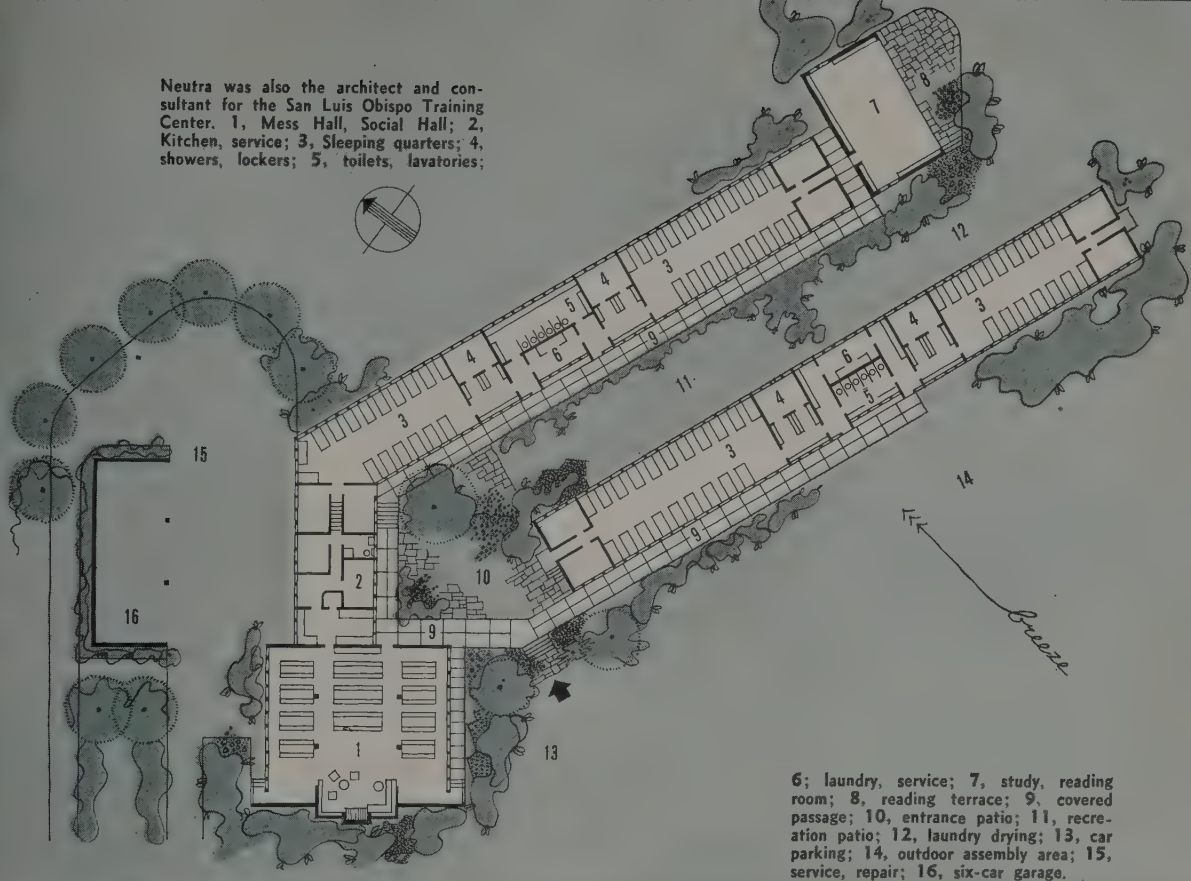
lar street gridiron, and carrying, side by side, miniature English cottages, Mexican ranchos, Cape Cod fishermen's huts, and all that dubious variety of yesterday's speculative subdivision art. Different, more convincing precedents have now actually been set *before the eyes of postwar consumers*; and postwar designers will not be bound to rigid, obsolete, *subdivision* patterns. The ice is broken, and so is the routine of the city engineer's office.

But the producers have yet to learn many wonders of dwelling production in series, far beyond the small multiplication table which they can now master. Workmen, foremen, trade unions, subcontractors all will have to awaken to the novel facts of postwar industrialization in dwelling construction. War industries and plants cannot, must not, simply shut down when peace bells ring. Their new, multiplied implementation and tooling cannot be

NYA YOUTH TRAINING CENTER, SAN LUIS OBISPO, CALIFORNIA



Neutra was also the architect and consultant for the San Luis Obispo Training Center. 1, Mess Hall, Social Hall; 2, Kitchen, service; 3, Sleeping quarters; 4, showers, lockers; 5, toilets, lavatories;



6, laundry, service; 7, study, reading room; 8, reading terrace; 9, covered passage; 10, entrance patio; 11, recreation patio; 12, laundry drying; 13, car parking; 14, outdoor assembly area; 15, service, repair; 16, six-car garage.

scrapped again without the economic disaster of mass unemployment and loss of a most useful, most advanced technical investment. Production of familiar materials has spread to many new locations, new materials have moved out of laboratories into production, light metals will have become common and inexpensive. Routine designers of the two-by-four variety may be puzzled; but an entire new generation of structural men, with novel skills and training, with manifold types of employment and creative gifts, will undoubtedly come into being.

The old places where skill was acquired—schools and colleges in their present shape—will hardly do. The monumental war industries, from aircraft manufacturers to large contracting firms in various fields, have been poorly served by them. The industries have had to maintain their own training courses of many types for employees and assistants.

Diversified, yet related, training projects (not unlike those of the National Youth Administration which as a consultant I was granted the opportunity of helping to set up) may supplement general public education, may link it with the requirements of particular industries.

As the war teaches us, training may start when trainees are quite young. This will insure to them the satisfaction and pride of early accomplishment, and all the psychological benefit of feeling themselves definitely useful in a new, promising order of

things. That the past decade of unemployment frustrated such a natural aspiration always appears to me as the most serious damage it produced.

The illustrated training centers, while following such decisions in matters of design and layout as I could furnish, were drawn up by the young vocational students, under supervision, in complete working plans and typical details, according to a long tradition followed by apprentices in my own office. Specifications and quantity surveys were made to conform to guiding principles which were comprehensibly presented by means of complete samples; and finally the structures were successfully erected by these students under foremen experienced in each trade. A small wage was paid as encouragement to each trainee.

From my extensive experience in organizing such acquisition of skill on actual planning and construction projects, I have no doubt that this method of structural training deserves much post-war attention. I have learned that it finds solid support in youths' enthusiasm, and in its desire for tangible accomplishment.

This war is a more technical one than any ever fought: thus it may indeed teach us much in organization, in collaborative use of skills, and in furthering their acquisition. Perhaps, when the war clouds are dissipated, it will prove the starting point for a creative development which will do away with that disorderly obsolescence from which youth in urban and rural life has long been suffering.



The San Luis Obispo Training Center, in the San Luis Obispo Mountains, is definitely not one of the "old places where skill was acquired. As completely as present customs and taboos permit, it is truly a training center, where preparation for living can be acquired, where learning is not taught, but experienced.

The resident students had a hand in designing and building this and other projects. Basic decisions were made for them, but they gained intimate knowledge of the practical problem which creative genius must solve, of the necessity for coordination which only a limited few comprehend today. Photographs show: across page, general view from the south; directly above it, the patio; at left, entrance detail.





WAR HITS HOSPITALS

The rendering above portrays the Rome Hospital in Rome, New York, built before Pearl Harbor. Bagg & Newkirk were the architects; Harold G. Rice, associate; Charles F. Neergaard, consultant. It is typical of pre-December-7 hospital architecture, probably better than most. A portion of a typical floor plan is shown on page 44.

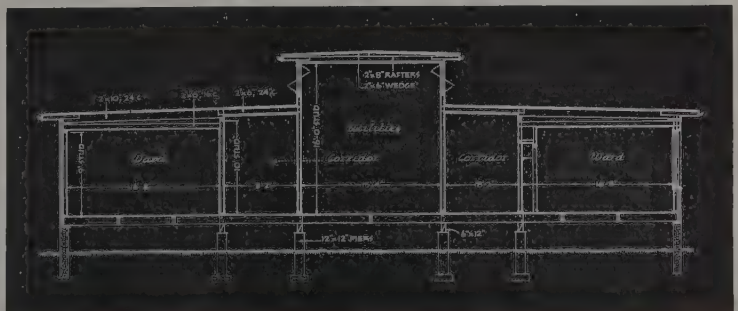
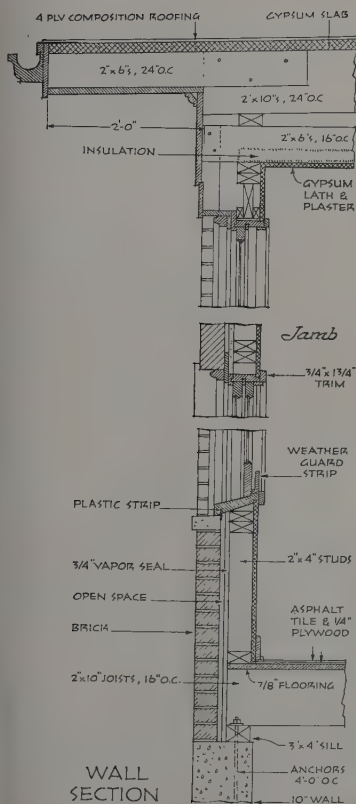
In contrast, the rendering across the page shows an addition to the new Sisters Hospital in Buffalo, New York, for which George J. Dietel was the architect. Originally this, too, was planned as a multi-story building; but the war forced a change in plans.

The contrast between the two is more pointed than appears on the surface. It goes deeper than mere structural ingenuity in finding substitutes for non-available materials. In the Buffalo hospital addition, the fundamental problem was attacked. The result is an entirely new type of hospital plan, not a scheme in which a multi-story building is sliced into layers which are then laid out on a single level. The Buffalo project bears some resemblance to schemes for multi-story hospitals developed independently by Charles Neergaard.

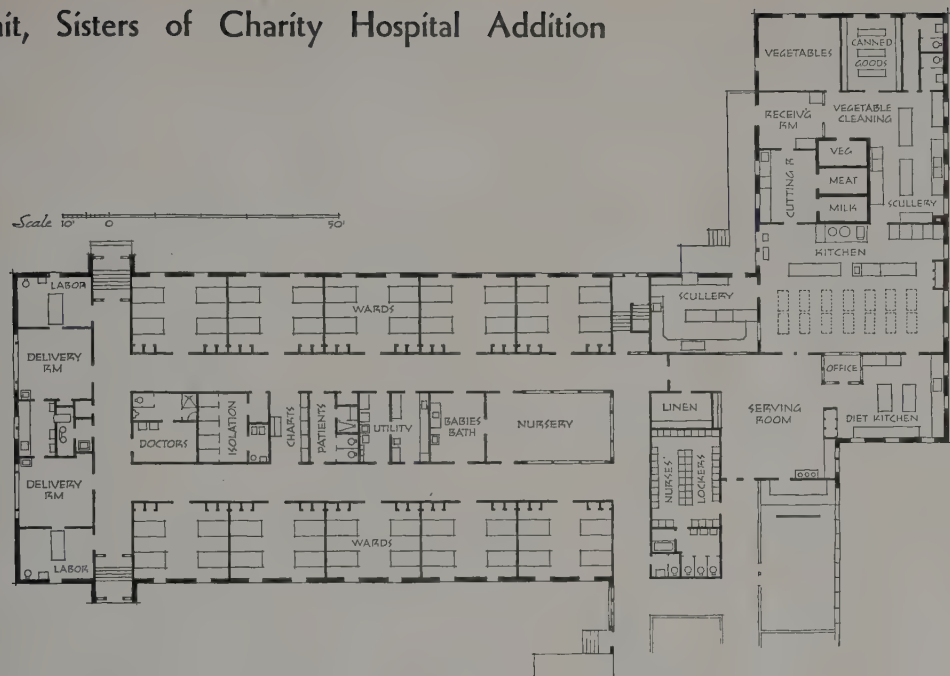
Examination of plans (page 45) reveals that the addition is in reality a complete hospital. It could operate individually of the building to which it was added. The unorthodox organization of the plan is readily apparent. All the services — laundry, laboratories, work rooms, nurses' stations, utility rooms, etc. — are in a block in the center of each wing and are lighted by clerestories. Two corridors surround this block.

When this present war was in its infancy, enthusiastic Americans sent abroad a Finnish-American Field Hospital, which was supposed to be portable. It was equipped with all the latest doodads—so well equipped that the doctors in charge had considerable difficulty in transporting it. At the end of Russo-Finnish hostilities, the unit went to Norway; when, later, the hospital had to be abandoned, its sponsors gave it to the Finns. This hospital, supposedly portable yet never successfully transported, was immediately divided up into several excellent, permanent hospitals by that thrifty nation.

The same could be done with many of our American hospitals, if circumstances should some day require. Does this mean that our hospital architecture has in the past been too "well fed," too luxurious?



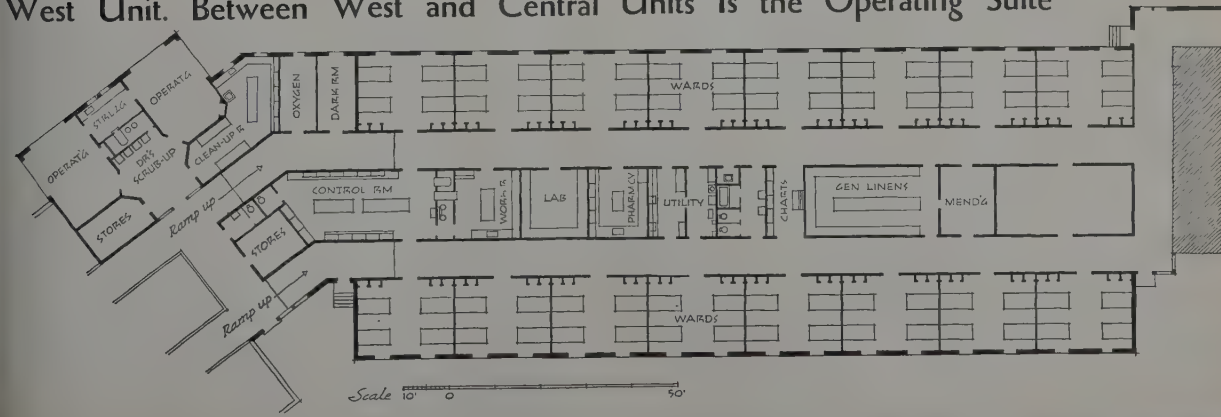
East Unit, Sisters of Charity Hospital Addition



Central Unit of the Addition Contains the Administrative Offices



West Unit. Between West and Central Units Is the Operating Suite



WHAT CAN SCHOOL DESIGNERS

By N. L. ENGELHARDT,

Director, Division of Field Studies,

Teachers College, Columbia University

THE war will bring about considerable change in school planning in this country. Many traditional ideas about the school-house will be altered; many factors aid and abet this movement. School buildings will be more fully used by their communities. These are changes over which few tears will be shed.

The decentralization of cities has become an acknowledged fact. The automobile age helped: people moved out from congested urban centers, seeking sunlight, fresh air,

Center Line, Michigan, School—Eliel & Eero Saarinen and J. Robert F. Swanson, Architects



EXPECT?

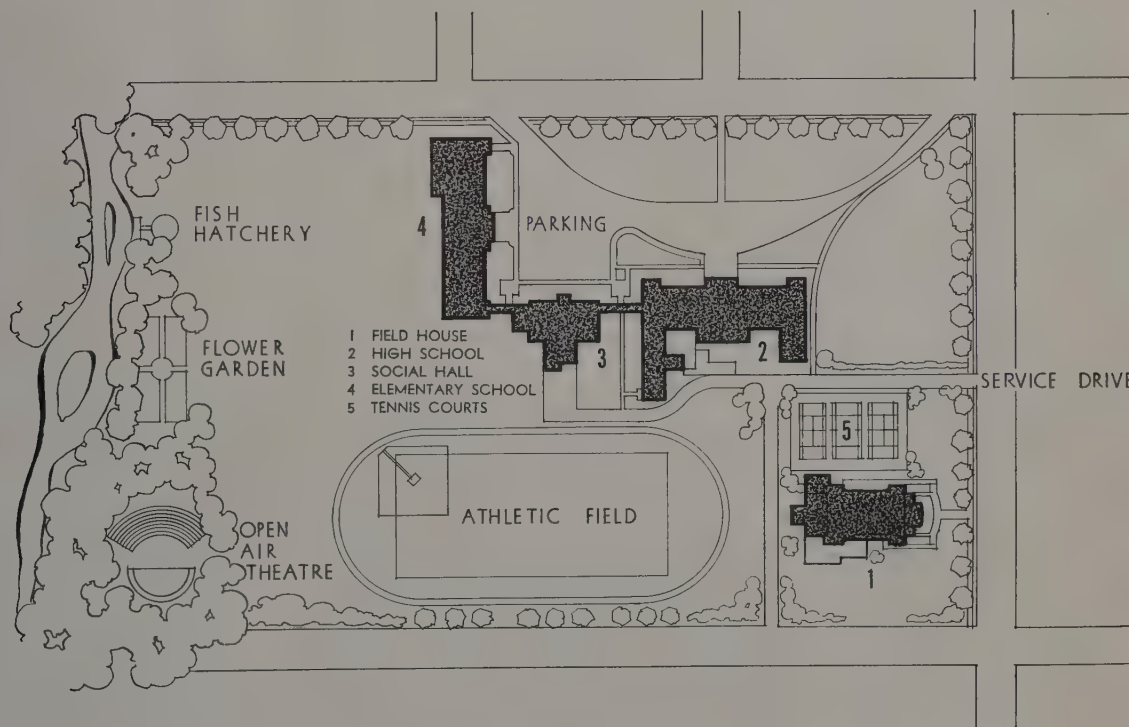
and open space. The air age, annihilating time and space, may give further momentum to this exodus. As people plan new centers in which to live, they will revise their ideas concerning the nature of a schoolhouse and the uses to which it is to be put.

The stress in recent decades has been upon safety and sanitation, upon concentration of school building spaces, upon building architectural monuments. Tomorrow the emphasis will be upon the purposes to which the school is to be put, and upon developing

school structures which can be used by all kinds of people, not children alone, for many hours of the school day. Planning will not be concerned solely with the mechanistic characteristics of a building, but upon the social significance of its spaces and the possibility of their use for learning the ways and participating in the methods of democracy.

No school building will serve a community adequately if it is designed without reference to the changing problems which confront people. Today, some public works programs are being advanced with the idea that school building plans can be drawn now so that after the war school construction may start immediately. Many of these, like those built under PWA, will be obsolete before contracts are let. They will express merely the traditional, institutional concept of what constitutes a schoolhouse. But *if the school is to be a vital part of society, the boards of educa-*

Community School, Dover, Delaware, Walter Carlson, Architect



The recently-erected units of the Dover School—Social Hall, Elementary School, and Field House—are planned around the old high school building. The recent Governor's Inaugural was held in the Field House and the Governor's Inaugural Luncheon was given in the Social Hall. Thus the school has become intimately related to the state as well as community life.

The Center Line School, built as part of a war housing project, was designed to serve the community as a whole. Within the building are provisions for administrative offices and community affairs as well as a complete elementary school. (Photograph by John S. Coburn.)

tion for tomorrow will have, first, to canvass thoroughly the desirable changes that have already been made in school planning, and to study the impact of this war upon the educational needs of our people. Let us build, after this war, the kind of schoolhouses which will further the democratic program for which the war is being fought.

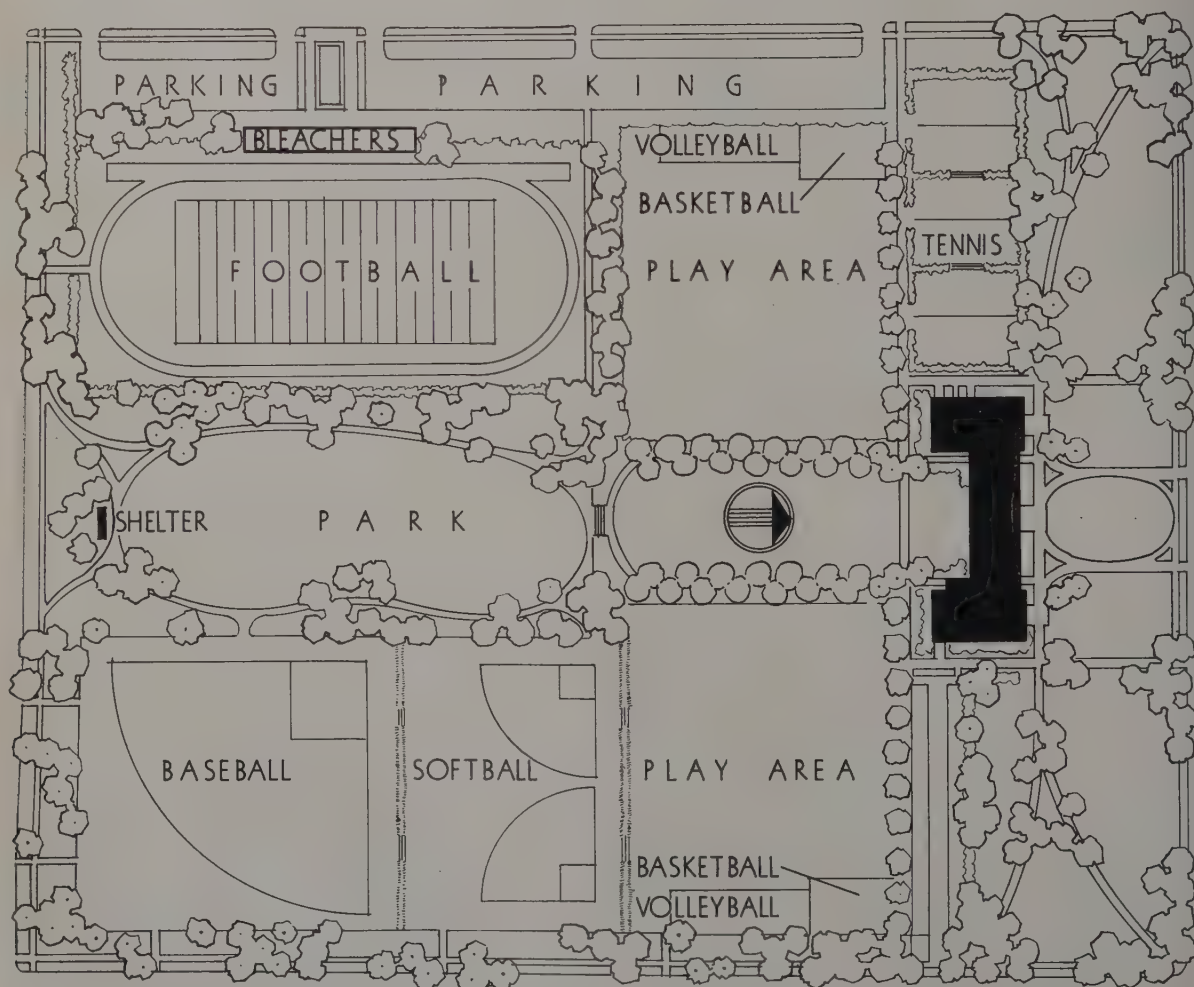
Population changes affect the schoolhouse. The communities being planned today will probably have peak elementary school enrollments in the first two decades of their existence, with the greatest secondary school loads coming subsequently. Many an American community which has built elementary schools for such peak loads, finds now that an unexpected proportion of its elementary classrooms is empty. Why? Because the classrooms were planned to be scarcely usable for any other purpose than an out-

moded program. If they had been planned for combined elementary school and general community use, the school buildings could now be satisfactory community centers. No school should be erected henceforth in which wide community use is not given full consideration in the original planning.

Since December 7, 1941, our people have been learning how to work together in groups serving community, state, and national purposes. This kind of group activity will tend to continue after the war, and will need building facilities. Multiple use of large school spaces, such as auditoriums, cafeterias, and others, can provide satisfactory accommodations for it.

There will be centered about the school in post-war times various types of programs associated with an extension of adult learning in many forms, and also the forum, discus-

Arlington Heights High School, Fort Worth, Texas, Preston M. Geren, Architect



sion, and planning work of a community which, of necessity, will be concerned with problems representing common needs (food, shelter, clothing, financing, governing) forced upon it by postwar society.

So the future schoolhouse *must* be a community house. It must not be afflicted with the old disease of *cubicle-osis*. It will have to be highly flexible, highly adaptable, thoroughly in tune with educational programs seeking to solve fundamental problems of democratic living and relationships.

Already, many American communities have learned to use their schools twenty-four hours a day. What a contrast between this utilization and that which formerly prevailed! Some boards of education seemed to regard schools as personal property, the use of which beyond the five or six hours of the old school day could be prohibited. Now,

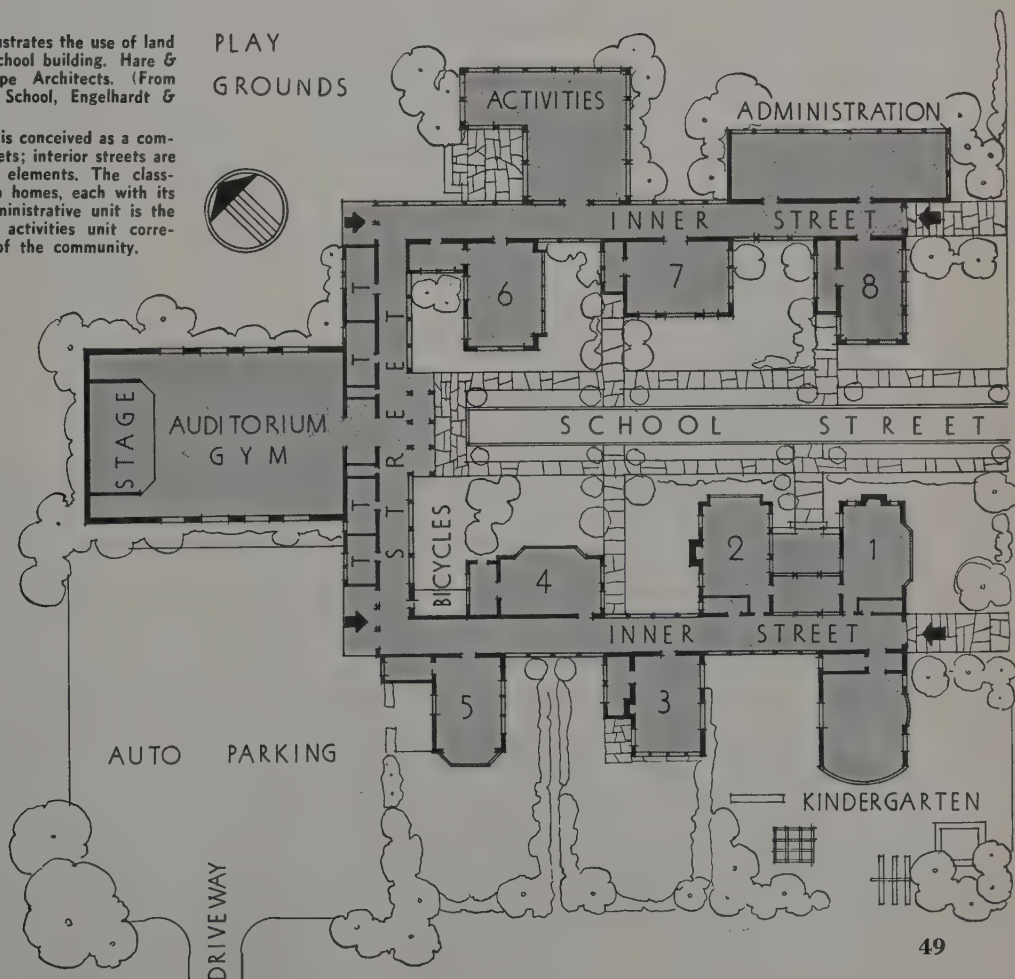
vacations find these schools open; classes of all ages use the buildings; classes are held around the clock, night and day. Every realm of human interest has found a "class" anxious to explore and to prepare for constructive work. Americans will never again allow their schools to be closed to them except for a few hours a day, for a few days a year.

New agencies find the schoolhouse useful. Consider draft boards; when we win the war, our military forces will be supplanted by armies to assist in world rehabilitation, and some form of draft board may then be needed to relate youth more directly to the services which must be rendered. Perhaps there will be a drafting of youth into worthwhile, non-military, national service, of a kind which will attract them. Employment service cannot be left to chance as it has been in years past. All these are functions of society for

Project by Harrison & Fouilhoux, Architects

The school across-page illustrates the use of land in conjunction with the school building. Hare & Hare were the Landscape Architects. (From Planning the Community School, Engelhardt & Engelhardt.)

The school at the right is conceived as a community. Corridors are streets; interior streets are well protected from the elements. The classrooms (1 to 8) are group homes, each with its garden and yard. The administrative unit is the community hall, and the activities unit corresponds to the industries of the community.



which we must plan, activities which can be housed in our schools.

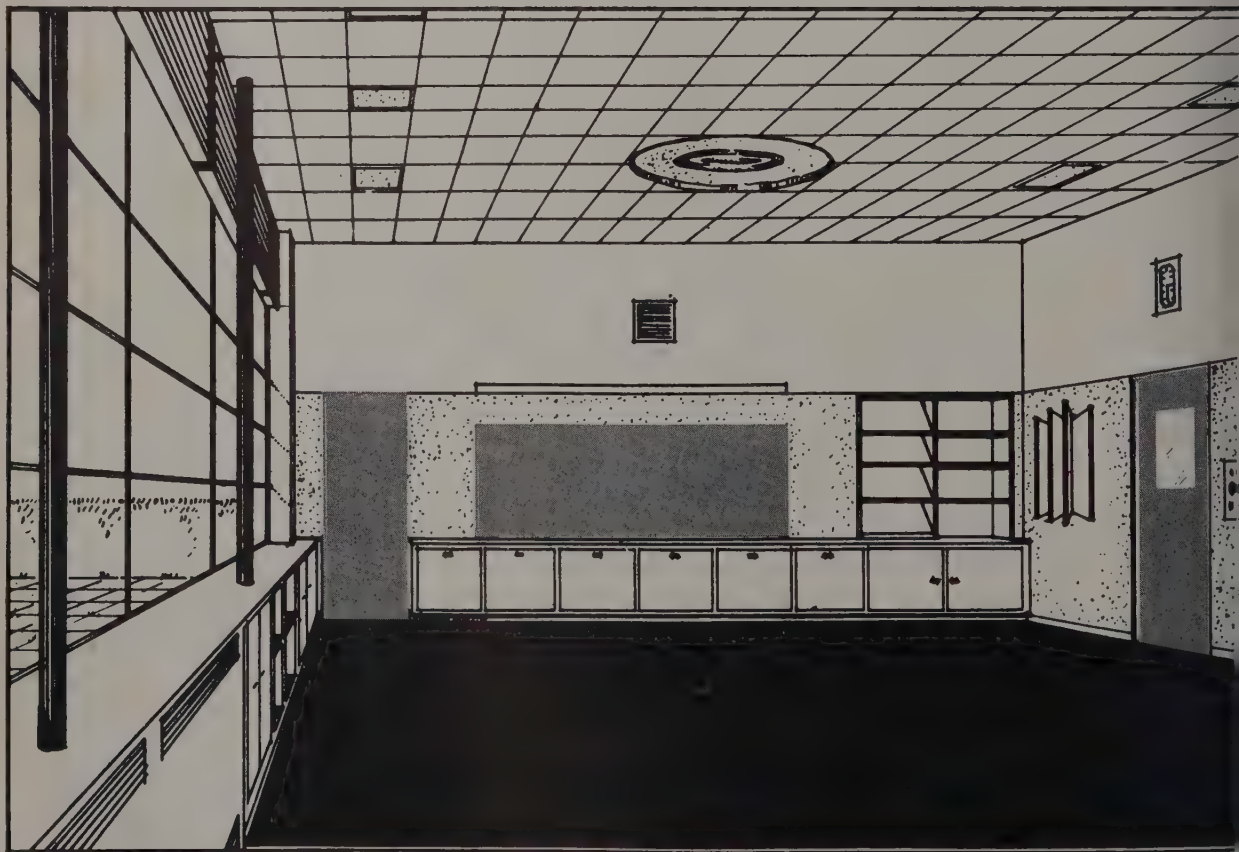
State legislation and regulations of state building divisions have tended to freeze building concepts into fixed molds. This result may always be expected when laws are written in specific terminology for one generation. Once established, only the strongest pressure and crystallization of public opinion succeed in dethroning such standards. Proof of this strikes any who tries changing a so-called standard, long imbedded in law or custom, and supported by many devoted adherents.

Yet standardization and legislation have been of inestimable value in progressing from early stupidities or indifferences in planning through a period of paternalistic safeguarding of human interests. Now we experience a terrific disturbance of the foundations of our political, economic, and social life—we are at war, and the fact affords us

an opportunity again to evaluate past procedures, to reweigh continuing forces, to determine future policies.

Annual Federal budgets of fifty to one hundred billions will have a direct bearing on local school plant development. Schools will continue to be built. We Americans have accepted them as "first lines of defense," and will in the future use them more constructively on "offense." Communities which build schools will, however, find less money available for other needed projects. Consolidation of community projects in the one enterprise with which we can not dispense—the school—logically follows. The community school will become more firmly established after the war. It will be planned to serve purposes for which in the past other, separate facilities have been erected. Its grounds will be more spacious. Its planning will be in terms of the needs emerging out of community health, physical rehabilitation,

Elementary School Classroom Designed to House an Activity Program



better housing, family life, nursery education, economic re-establishment of the community, and vast numbers of group activities, created by war and postwar conditions, for both youths and adults.

As for adult education, world strategy, of war and peace, must become popular knowledge. Day and evening conferences, discussions on aviation and its influences on world economy, on intrahemispheric relations, on readjusting the world's business, on reconstructing its cities, on restoring its health, will make demands upon the school. Youth, too, must be provided with laboratories and workshops for action. The hope of mankind will center in the amount and character of education which will be provided.

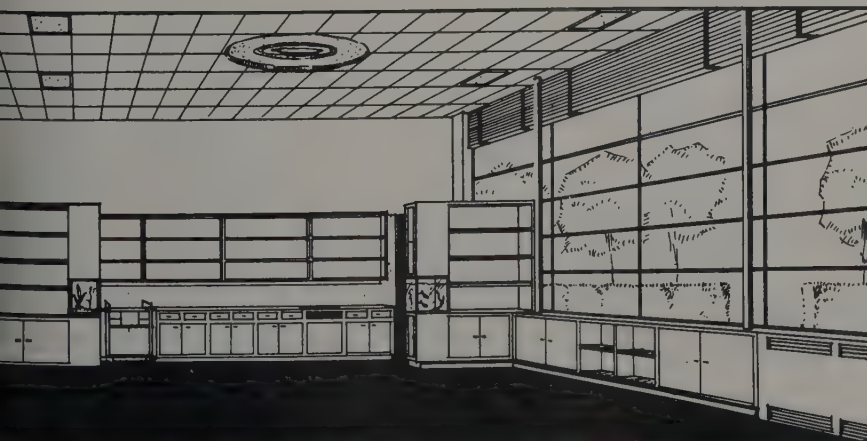
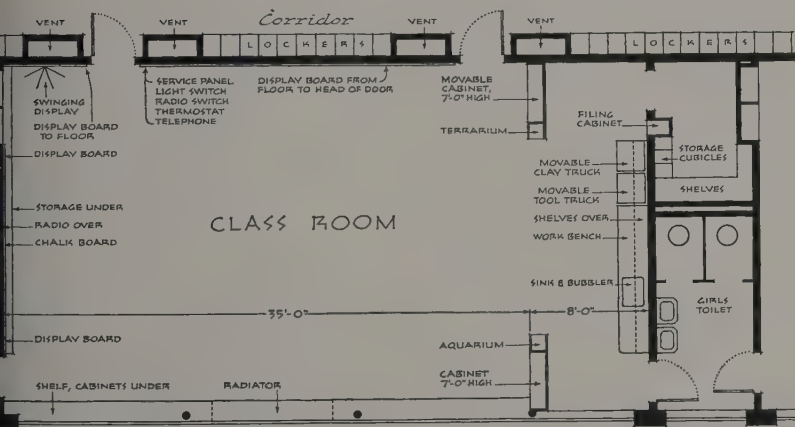
This must be the goal, and the stilted education of the past will not suffice. An education associated with *rethinking* the needs of man, and *recreating* the political, social, and economic mechanisms for satisfying those

needs, must be provided for us. What kind of schoolhousing will serve these purposes?

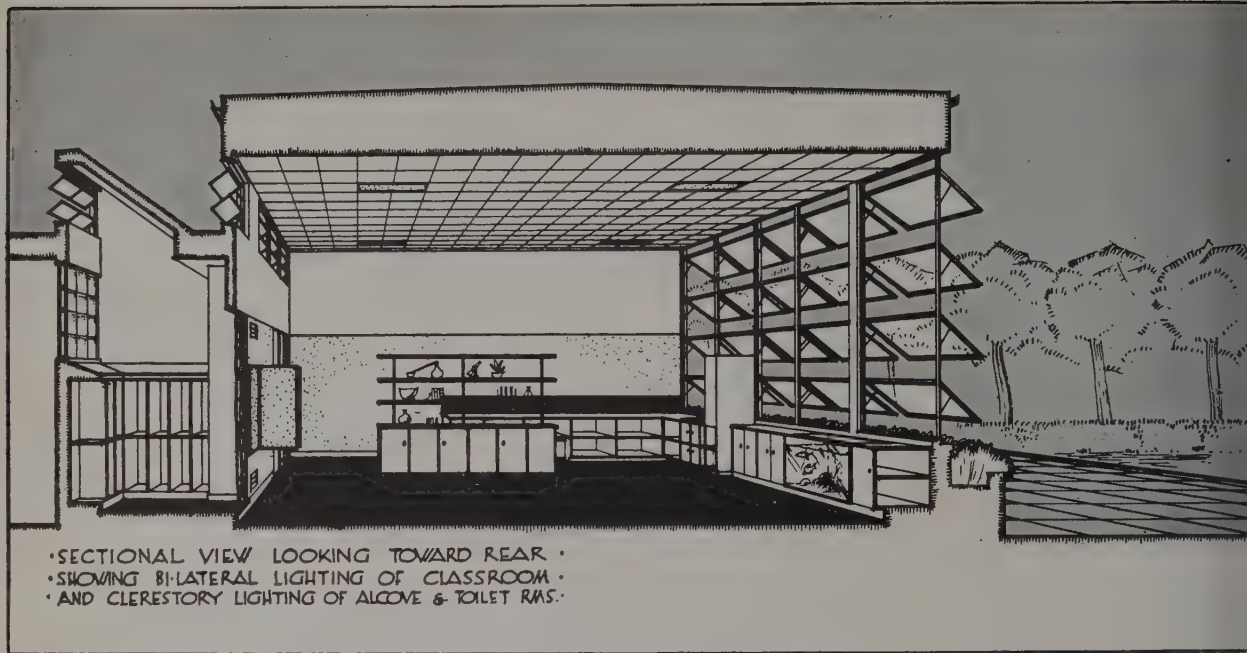
The past decades have not served youth well. Makeshift organizations, local and national, have done their bit, but youth's program must be planned *definitely* in the school. Through an orderly, unfortunately slow, process, the school organization has changed from K-8-4* to variations of the K-6-3-3.* The junior high school has been tried. Advantages have been discovered, disadvantages unearthed. The postwar period promises to bring a rapid development of the NS-K-6-4-4* organization. The terms "junior high school" and "high school" may be supplanted by "middle school," and "youth regional center." The nursery school will come into wider acceptance. (Turn to page 52)

*K-8-4: 1 year of kindergarten, 8 of elementary school, 4 of high school. K-6-3-3: 1 kindergarten, 6 elementary, 3 junior h.s., 3 senior h.s. NS-K-6-4-4: 1 year nursery school, 1 kindergarten, 6 elementary, 4 junior h.s. or secondary, 4 senior h.s. or pre-collegiate, pre-vocational, pre-induction.

School Planning Associates, Architects



Dimensions of this classroom are larger than are common today. The toilets have been placed so that each serves two rooms. Ample storage space is necessary to an activity program. In this example are included a storage room as well as filing cabinets, bookcases, magazine racks, shelves, and cabinets under windows and in the work bench. Work area in rear of room is made flexible in size and use by providing movable cabinets. Walls are intended to be covered from floor to doorhead with cork, and a swinging corkboard is also usable for display space. The intention here is not to provide a typical classroom, but rather a laboratory in which children can learn by experimentation.



Classroom Designed for One-Story Construction

Like the previous example, this is planned for "laboratory" teaching techniques. The ingenious use of clerestories makes it possible to concentrate the small storage rooms, toilets, and alcoves along the normally dark corridor side of the room. It also provides bilateral lighting for the classroom itself.

Today the nation calls on youth to serve; tomorrow it will be youth's turn to call upon the school for opportunities and training to continue national service according to individual abilities. Curricula must be broad as life's needs, courses flexible, learning opportunities must fit the student's characteristics. These criteria of need suggest great variations from past practices in planning, equipping, and constructing classrooms, laboratories, and shops.

In the first World War we learned that many of our youth were physical defectives. This war, in which 50 percent of our manpower is being rejected for physical reasons, drags this national disgrace out into the limelight again. Are Americans so foolish as to permit continuing repetition of this failure to build a strong, healthy nation? We cannot permit it. The school will tackle this job of building sound men and women as it never has in the past.

Small school sites and inadequate facilities will not be countenanced. Gymnasiums (note the plural) will be parts of the school,

not merely the inner tubes of auditoriums; they will be planned for all day and evening service. Correctional gymnasiums will increase in number. New emphasis will be placed upon using the out-of-doors. School sites will be measured in acres, not square feet. Communities will realize that land is to be used to improve man, rather than that man is to be used to improve the land.

For the American people are rich in land. In the past we have, however, been miserly in setting aside land for public school purposes. The future should witness general adoption of practices which already prevail in the few best school systems of the country. Education should be more intimately associated with the land and our teaching program must emphasize the value of land for recreational purposes, as a source of food, for outdoor social purposes, and for countless other ends to which well-landscaped, well-developed land may be put.

Let us bear in mind that the demands of aviation will also dictate larger school sites. Glider flying need not be dangerous, but it

needs room. We will have clubs, to enable youth to learn all about aircraft. If our police forbid use of parks for these flying experiences, the community should provide other space for youth to carry on without interference. School grounds with play fields, water areas, picnic groves, natural theatres, nature crafts sections, and gardens may sometime become the usual rather than the unusual in our democracy.

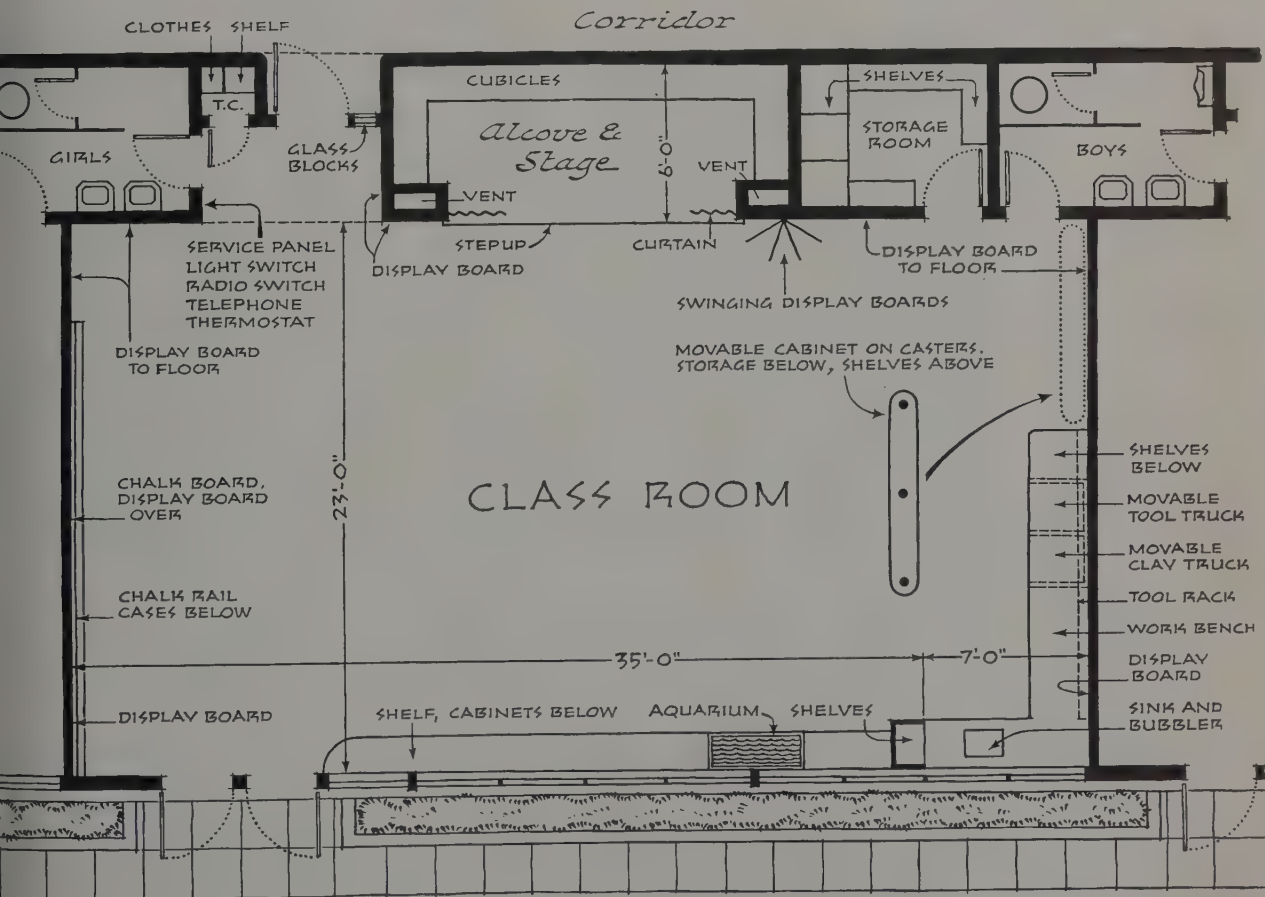
Large-scale housing, of both the apartment and the cottage type, may proceed at prodigious pace after this war. The rebuilding of cities is bound to take place. Where does the school fit into such developments? Is it merely to be an additive, as it has been too frequently in the past? Or is it to be fully integrated into the original planning pattern? What kind of school shall it be? What pur-

poses should it serve? What is to be its relationship to parks and playgrounds? For what age ranges should it be conceived?

In *Planning The Community School** are many illustrations of elementary and secondary schools developed to meet specific community needs. There exist many delightful auditoriums and cafeterias in which complete adjustment to both school and community purposes has been made. Individual areas planned for multiple use include laboratories for domestic arts, community libraries, and facilities for vocational education and rehabilitation. No great extra cost is entailed by this wider and more democratic use of the school building itself; no school space need remain an ivory tower.

*Engelhardt, N. L. and Engelhardt, Jr., N. L.: *Planning the Community School*, American Book Co., 1940.

School Planning Associates, Architects



The nutritional needs of our nation, the wealthiest in human foods, are being strikingly brought home to us. Food values, their place in family life, and their importance in agricultural development should play important curricular roles from the earliest grades. We have the scientific knowledge; can schools be planned to take advantage of it?

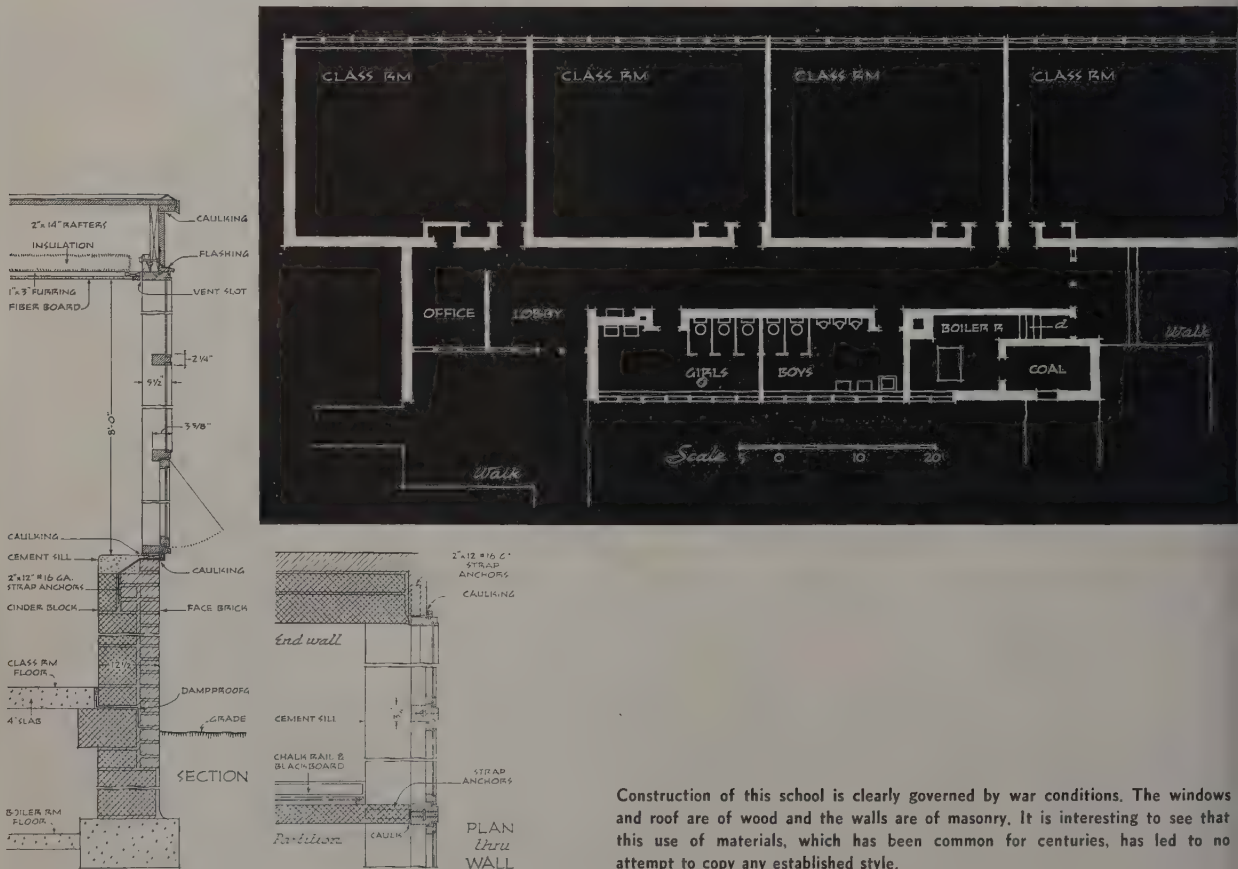
Elementary classrooms, stereotyped in size and nature, and planned for forty seats and forty feet of blackboard, should be freed from worthless traditional standards. We have to take some of the dreaded monotonous, institutional characteristics out of them. Human interest, beauty, and uniqueness must govern their planning. Needs of children and parents dictate plans flexible, spacious, and adaptable to essential group

needs. Any group interested in the livability of classrooms might well study what similar groups have done in Arkansas and Utah.*

The school plant of the future must fit the needs of the community. It must be planned with relation to the resources of the community. It must provide for the economic and social development of the community. It must offer a rallying center for all kinds of groups interested in promoting the interests of the community. Such a school will take on characteristics vastly different from those of schoolhouses of the past. If our democracy is to advance the facilities provided for education must be planned to aid constructively in that advance.

*Engelhardt, N. L. and School Planning Associates; *Elementary School Classrooms, Portfolio A*. Bureau of Publications, Teachers College, Columbia University, 1941.

"WAR SCHOOL" FOR THE TREADWELL SCHOOL DISTRICT



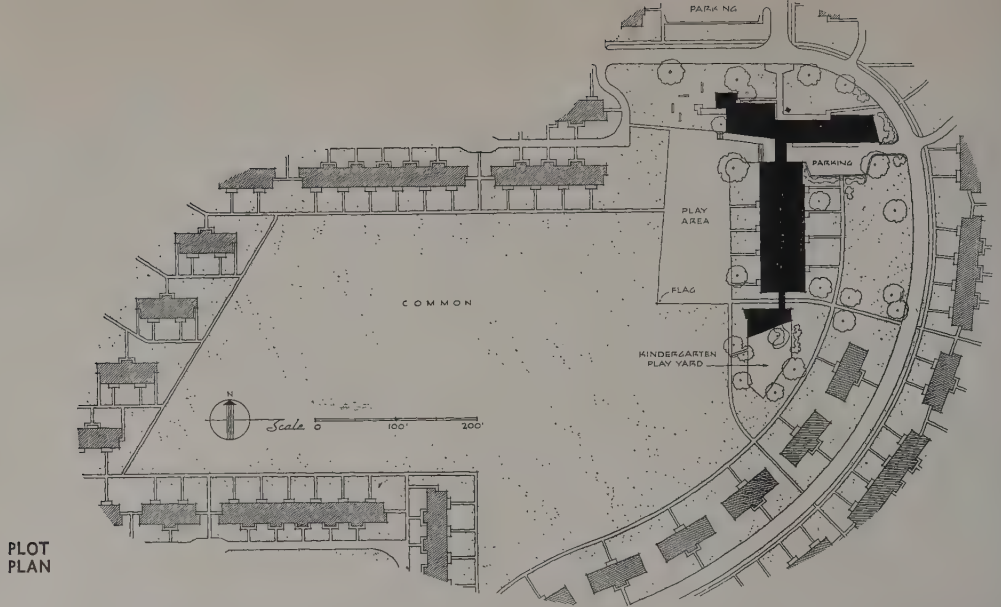
Construction of this school is clearly governed by war conditions. The windows and roof are of wood and the walls are of masonry. It is interesting to see that this use of materials, which has been common for centuries, has led to no attempt to copy any established style.



WAYNE COUNTY, MICHIGAN—LYNDON & SMITH, ARCHITECTS

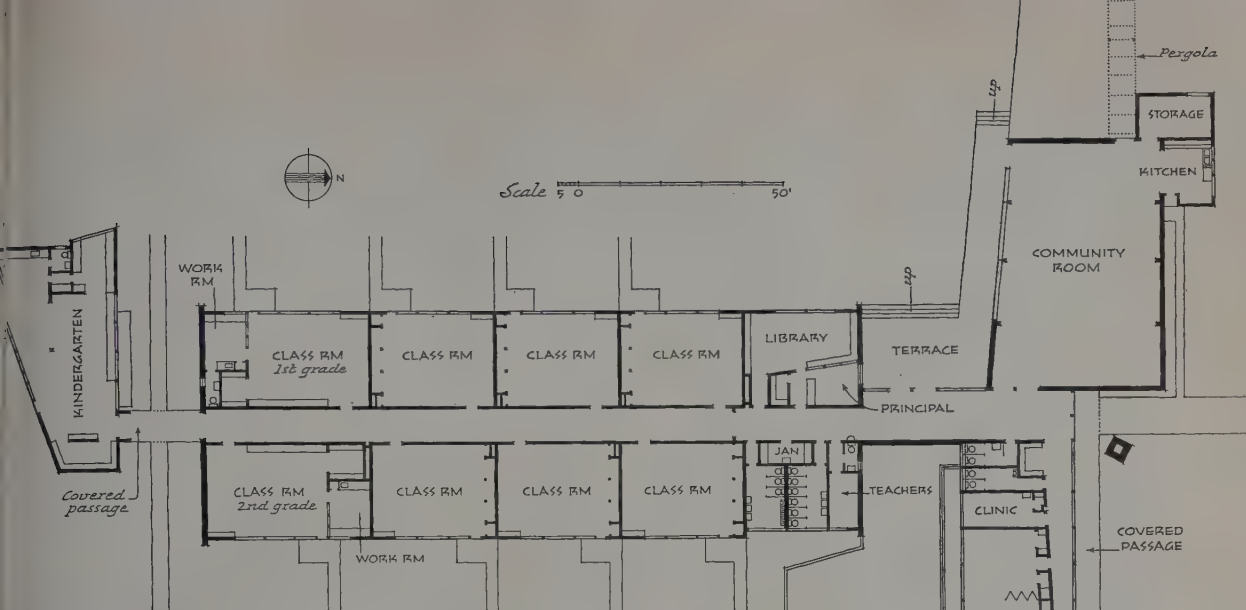
ALTHOUGH this school does not typify the "plan-for-community-use" which Dr. Engelhardt advocates in his article, it was necessitated by community expansion which resulted from a tremendous increase in war industry. The severe limitations imposed by War Production Board rulings have reduced the schools to the minimum once found in the typical, American, little red schoolhouse. The bare essentials—classrooms, toilets, heating plant, and small office—were all that could be built. The construction is shorn of many of the gadgets which we have come to consider essential to good schoolhouse design. It has not the same sleek quality which many steel-sashed and over-architected schools have exhibited in the past. Yet it is light and free, thoroughly modern, and shows what a competent architect can do even when rigidly restricted.





SCHOOL-COMMUNITY CENTER, Center Line, Michigan — Eliel & Eer



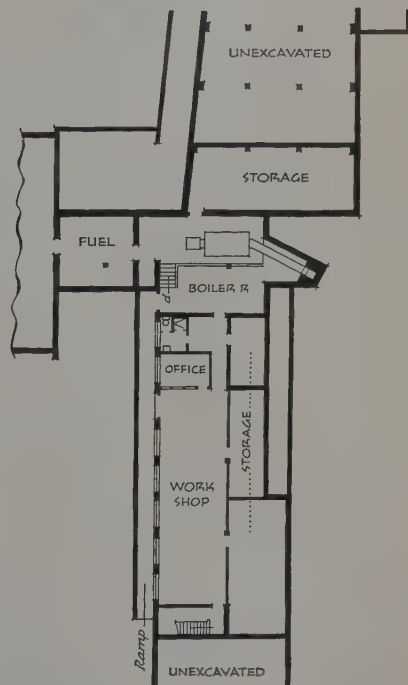


Saarinén and J. Robert F. Swanson, Architects



In this example the architects had an opportunity to make the school and community house a building in which the life of the entire war housing community could center. The plan of the first floor, above, shows how the project offices, medical clinic, community room, library, elementary classrooms and kindergarten were combined on one floor. The building also contains a workshop in the basement. It is convenient to one of the project's main parking areas. Activities on the older children's play area can overflow into the adjacent common, around which the homes are grouped. The project street (shown in plot plan) to the right of the school building, is so laid out that it will not become a traffic artery, a fact which reduces the possibility of accidents involving school children.

Individual classrooms open out directly to the east and west through doors in walls which are virtually all glass. This close relation between indoors and outdoors has seldom been achieved in a school located as far North as this. The kindergarten unit, in accordance with up-to-date school planning theory, is almost a separate building, and has its own fenced-in play yard. Entrances to the four principal units of the school and community building are well separated, so that activities in one part need not interfere with the working of other portions.

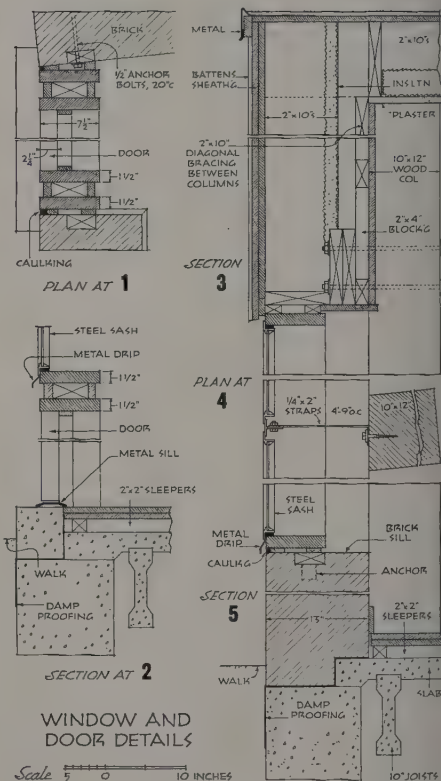
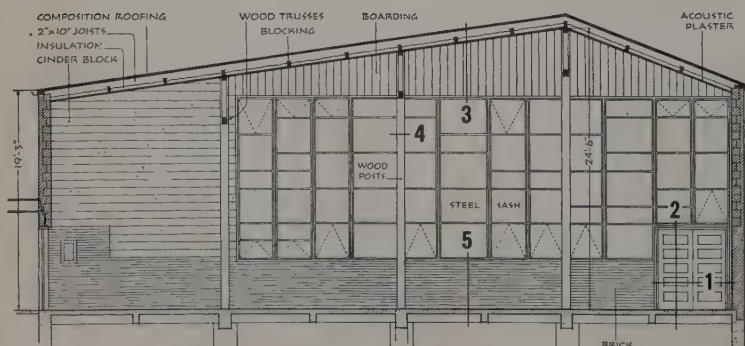




CENTER LINE COMMUNITY HOUSE



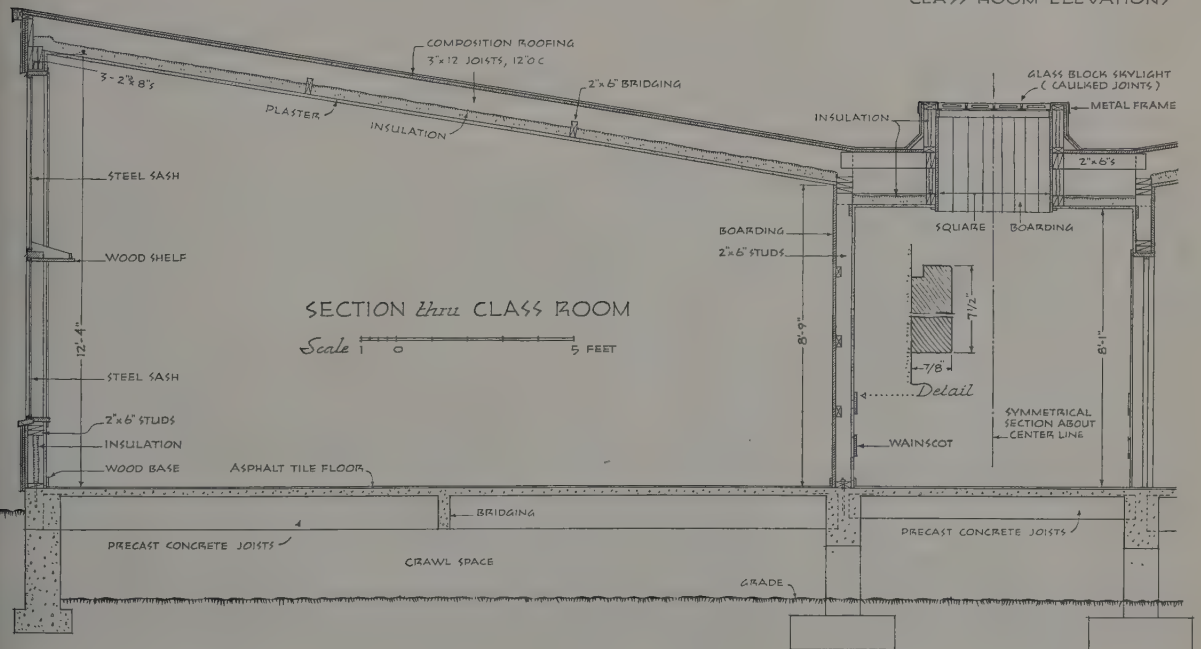
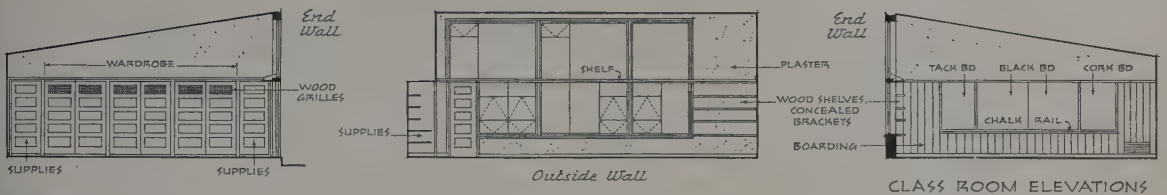
The community room is a single large area, with wood trusses supporting the roof, and masonry exterior walls. The floor is supported on a concrete slab on which rest 2" by 2" sleepers which carry the wood subfloor and finished floor.



Details of construction above are keyed to the section at the left. Although this structure was built before the priorities situation became acute, every effort was made to economize in the use of metals — hence the 10 by 12-inch wood columns and girders, and the wood trusses and roof framing. Almost the only use of metal is in the steel sash. The ceiling is plastered, and walls are partly exposed masonry, partly wood. In addition to the community room, this wing contains a small kitchen and storage space, and can serve as a banquet hall or theater.

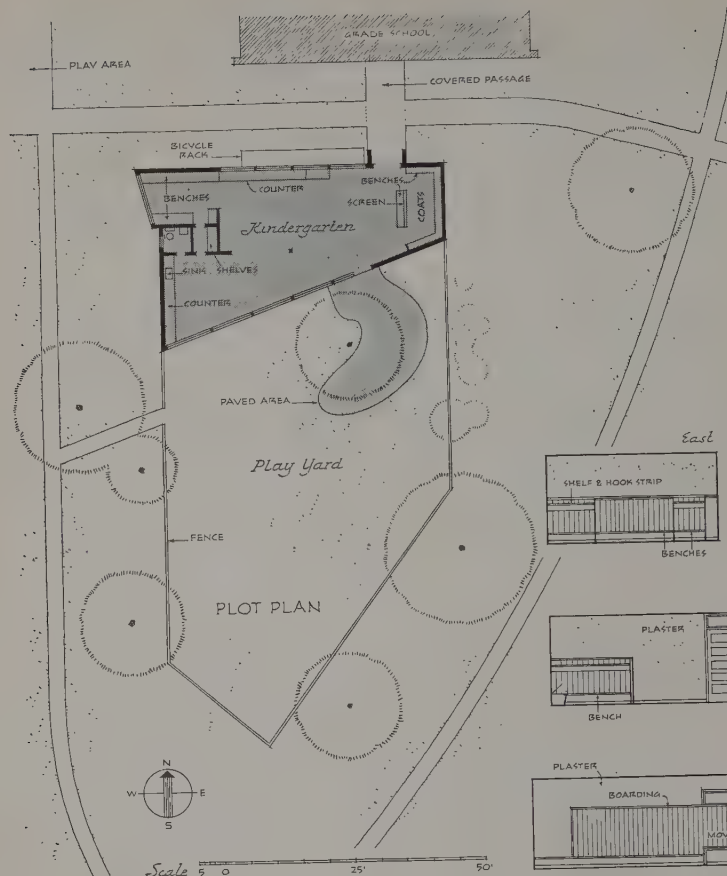


CENTER LINE CLASSROOMS

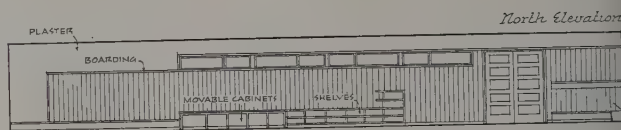
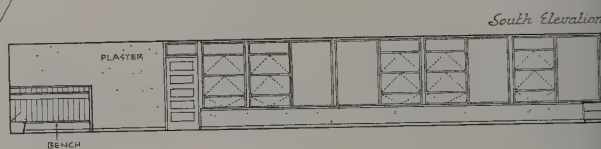
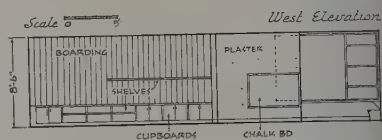
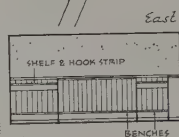


The section through the classroom wing of the building is a simple and direct translation of the essential design requirements. The use of a sloping ceiling to reflect light from the extremely high windows led directly to the sloping roof. The central corridor required light, so glass

block skylights were installed over it. Interior walls are of boarding applied vertically. Construction throughout is as simple as possible, requiring a minimum of essential metal. Floors are of asphalt tile applied directly to a concrete slab, which is supported on precast concrete joists.



The kindergarten unit has many advantages: it is separated from the remainder of the building; its long side is all glass and faces south; it has its own segregated play yard; and its interior is planned for up-to-date teaching methods. In the northwest corner of the kindergarten room is an alcove where children can work at individual projects. The coat alcove in the east end is so laid out that it can be used in training the children in putting away their over-clothing, and it is also convenient for the teachers who must help them. The kindergarten has its own toilet. There are also a small storage space for supplies, and a sink and counter. All the fixtures are at child height. Some of the cabinets are movable.



CENTER LINE SCHOOL—KINDERGARTEN UNIT



NEW PENCIL POINTS DATA SHEETS

PREPARED BY DON GRAF

STRUCTURAL INSULATING BOARD STANDARDS

Index No.
E 2 cc
MECHANICAL

PENCIL POINTS DATA SHEETS PREPARED BY DON GRAF

In February 1941 the Insulation Board Institute, the members of which produce approximately 90 percent of the vegetable fiber type of structural insulating board, requested the Division of Simplified Practice, National Bureau of Standards, to make available its cooperative procedure for the establishment of a simplified practice recommendation for this product.

The proposed recommendation was submitted, for approval, to manufacturers, distributors, architects, contractors, and others interested in the product, and was accorded sufficient support to warrant its promulgation as Simplified Practice Recommendation R179-41.

Product	Sizes	Thicknesses	Edges ¹
Building Board ²	4'-0" x 6'-0" 4'-0" x 7'-0" 4'-0" x 8'-0" 4'-0" x 9'-0" 4'-0" x 10'-0" 4'-0" x 12'-0"	$\frac{1}{2}$ ", $\frac{3}{4}$ ", 1"	Square
Sheathing	4'-0" x 8'-0" 4'-0" x 8'-6" 4'-0" x 9'-0" 4'-0" x 9'-6" 4'-0" x 10'-0" 4'-0" x 12'-0" 2'-0" x 8'-0"	$\frac{1}{2}$ ", $2\frac{5}{16}$ " $2\frac{5}{16}$ "	Do. Long edges fabricated, ends square
Thin Board	4'-0" x 7'-0" 4'-0" x 8'-0" 4'-0" x 9'-0" 4'-0" x 10'-0" 4'-0" x 12'-0"	$\frac{1}{8}$ "	Square
Lath	1'-4" x 4'-0" 1'-6" x 4'-0" 2'-0" x 4'-0"	$\frac{1}{2}$ ", 1"	Long edges fabricated
Roof insulation	1'-11" x 3'-11"	$\frac{1}{2}$ ", 1", $1\frac{1}{2}$ ", 2"	Square edges on $\frac{1}{4}$ -inch thickness; square edges and/or offset on 1-, $1\frac{1}{4}$ -, and 2-inch thicknesses.
Tileboard Panels	8" x 8" 12" x 12" 12" x 24" 16" x 16" 16" x 32"	$\frac{1}{2}$ ", $\frac{3}{4}$ ", 1"	Fabricated edges.
Plank	8", 10", 12", 16" x 6', 8', 10', 12'	$\frac{1}{2}$ "	Fabricated long edges.

¹ Fabricated edges refers to any type of edge treatment other than square edges, without reinforcement.

² Standard colors and finishes of building board are (1) natural board, and (2) one light-colored board; e.g., white, ivory, cream, or buff.

BLACKOUT MATERIALS

Index No.
F19 v
CONSTRUCTION

PENCIL POINTS DATA SHEETS PREPARED BY DON GRAF

A. Papers

1. Newspaper—6 layers bound together at edges—1 outer side painted black.
2. Kraft brown wrapping paper—24" wide, 40 lb./1224 ft. One thickness painted black both sides.
3. Blackout crepe paper—flameproof, Dennison Mfg. Co., 2 thicknesses.
4. Special type of sisal kraft paper used in Blackout Shade Company of America product.
5. Weatherproof black fiber paper, Clonay Corporation.
6. Black roofing paper.
7. Black paper representing opaque standard for windows, attached to British Standard APR14.
8. Corrugated cardboard—if no light leaks into open edges.
9. 14-ply Bainbridge show case board, 28"x 44" sheets, available in several colors, gray backed.

B. Window Shade Material

10. Oil painted, dark tan Vellmo 48, Columbia Mills.
11. Oil painted dark green both sides, Vellmo color 5, Columbia Mills.

C. Fabrics

12. Black felt.
13. Ivory backed dull black oilcloth, 50" wide, 75¢ a yd.
14. Black sateen, 50" wide, 75¢ a yd. 2 layers 93 x 133 threads to square inch.
15. Dark brown sateen, 36" wide, 45¢ a yd., 2 layers, 67 x 102 threads to square inch.
16. Black glosheen fabric, F. Schumacher Company—2 layers 36" wide, 89¢ a yd., 96 x 160 threads per square inch.
17. Blackout fabric, M. F. Moran, 2 layers—36" wide, \$1.75 a yd., 43 x 110 threads per square inch with special filler treatment (only 1 layer is necessary if illumination of window does not exceed 200 footcandles).

D. Synthetic Wood Boards

18. Three-ply, 1/4" plywood, painted black on 1 side and edges.
19. Masonite, 3/32" and 1/8".
20. Press board, soft, 1/4".
21. Tekwood, 1/16".
22. Blackout panel, asphalt treated felt, Flintkote Co.

E. Film

23. Saf-T-Black synthetic film, General Tire and Rubber Co. This film (white on 1 side and dark gray on the other) is applied to the glass and would thus necessitate the use of artificial lighting in the daytime. Its eventual removal does not offer serious problems.

Unquestionably this list is not all-inclusive of the absolutely safe blackout materials available. It pretends to list only those which proved best in tests on some 65 different materials which have been recommended. It was found, for example, that several layers of newspaper, dark-colored sateen draperies (indicating but 1 layer), and dark blankets were incapable of obscuring even 1 footcandle; that heavier steamer rugs, dark velvet or velour draperies, and small floor rugs became visible on the outside of the window when they were subjected to more than 5 footcandles.

Reprinted from The Magazine of Light, issue No. 6, 1942, published by General Electric Company.

SET
22
NOV
1942



RESIDENCE FOR

VAHAN HAGOPIAN

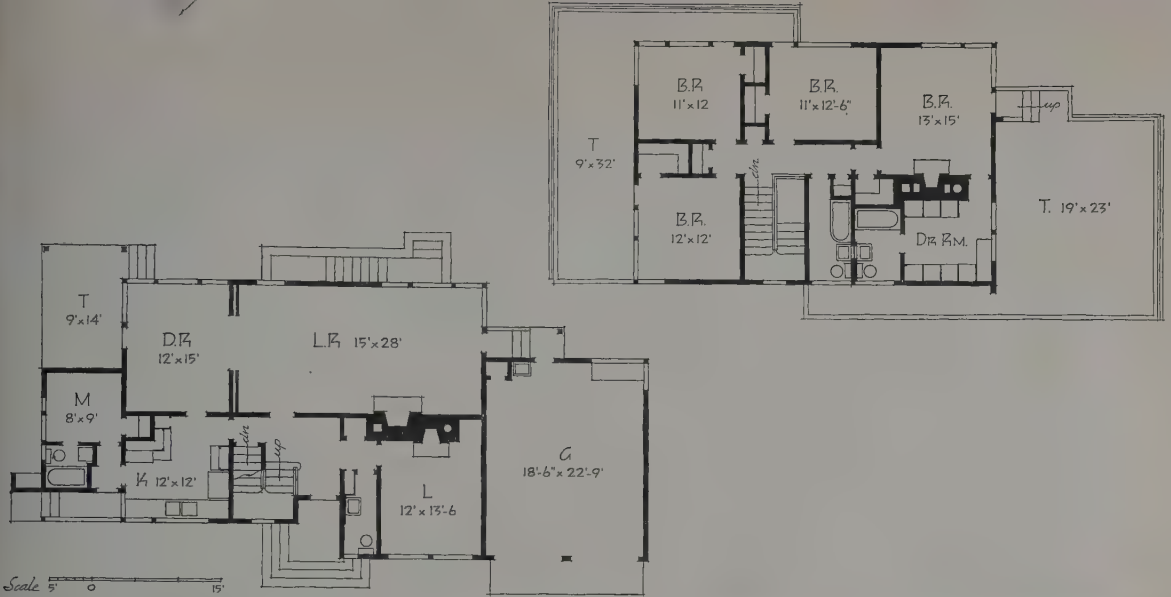
ARCHITECT

The background and mode of life of the client have a definite influence on the development of a house plan. This is evidenced in the design of the house shown on this and the following pages. The owner is one of two Columbia University professors who, together, purchased a tract of land and had their homes planned at the same time, thus affecting economies through the simultaneous erection of the houses. The plans and elevations, as well as the general appearance of the homes, differed totally in spite of the identity of materials and of the architectural and construction details. This procedure also enabled the competing contractors to lower their bids about five percent if they were awarded the contracts for both houses at the same time. Thus, the savings were translated into added advantages of space, amenities, built-in conveniences and equipment commensurate with the cultural, intellectual, and social life of the occupants. As may be seen in the photographs (front elevation across-page, rear elevation below) the house is of standard frame construction, with ship-lapped, unpainted, cedar siding. The house has been oriented so that the shade of the trees cuts the sun in the summer. Terraces add to the informality of living. (Photos by Van Anda)

DR. ROBERT M. MacIVER







In designing the house, the architect took advantage of the possibilities of orientation. All Master Rooms face the east, south, and west, with the exception of the Study which faces north for constant light. Extensive fenestration makes it possible to bring the outdoors into the house (note the plate glass, stationary picture windows). Terraces, accessible from every Bed Room (see plans above) allow the enjoyment of the out-of-doors. The relation of the Study to the rest of the house provides for seclusion when the Living Room and Dining Room are thrown open for entertainment.

At right is a detail of the entrance. All siding is Alberta cedar, unpainted, laid ship-lap. The exterior trim is of pine. Across-page is a detail of the rear of the house, showing the terrace for the Master Bed Room. Below is shown a corner of the Living Room.





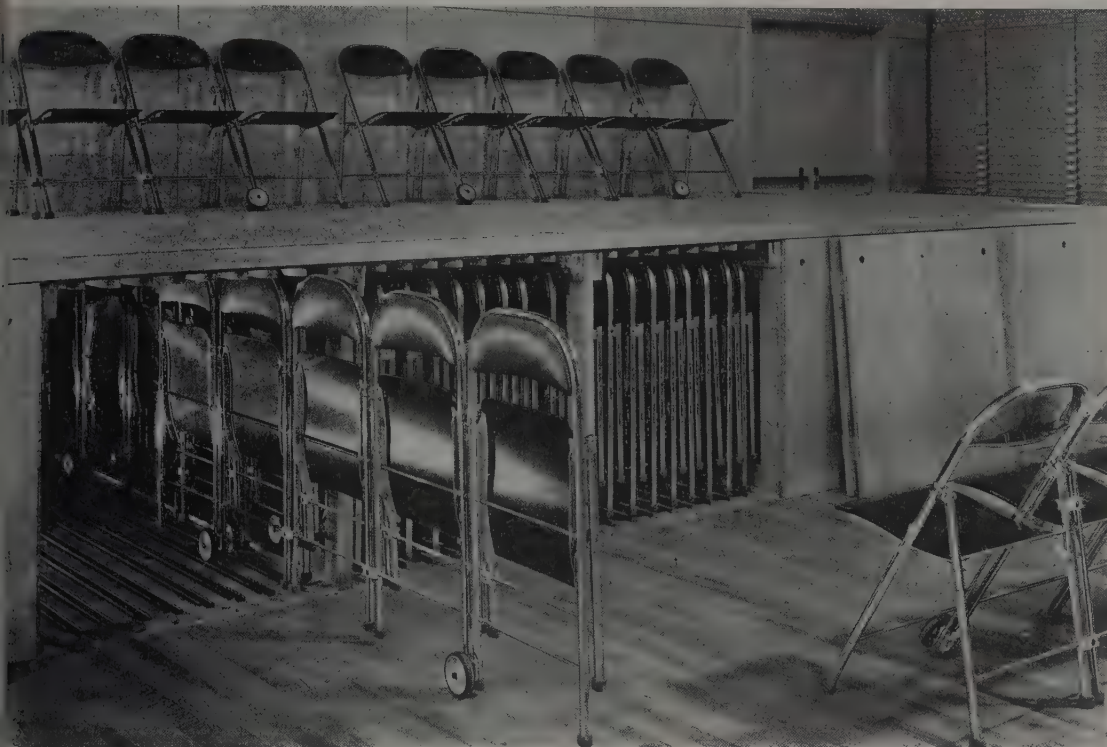
The Study (photograph above) provides seclusion from the rest of the house, especially when the Living Room and Dining Room are used for entertaining. Note the specially-designed lighting fixture above the window. Built-in furniture adds extra space in the Living Room (photograph below). All photographs were taken by George H. Van Ande

MATERIALS AND EQUIPMENT

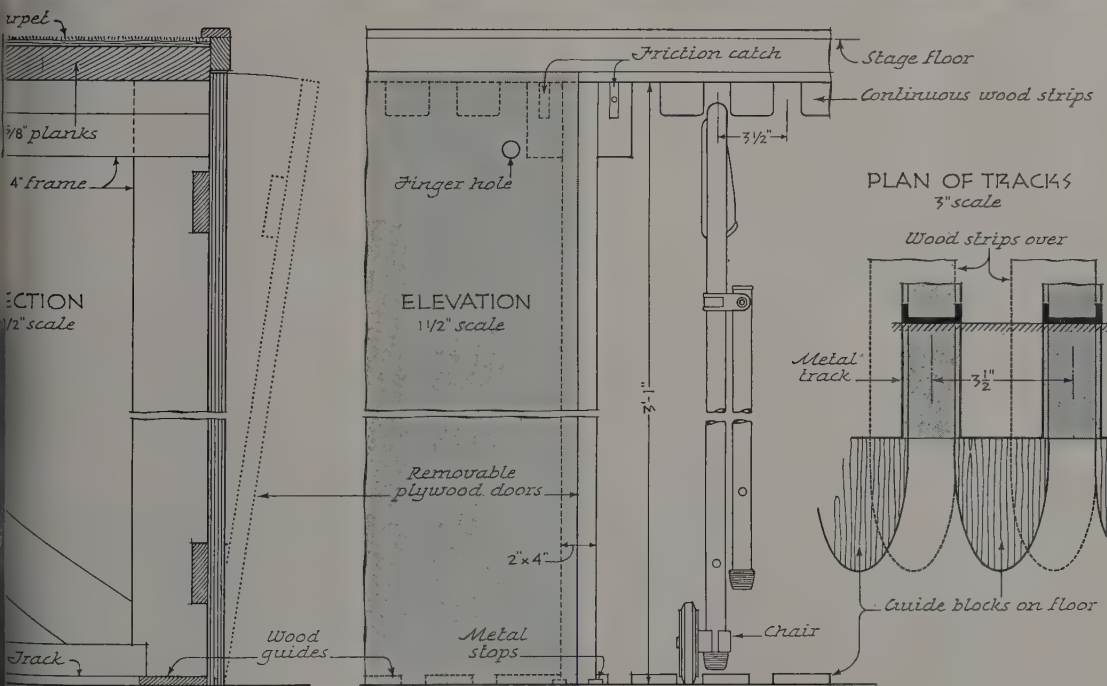
FOOTINGS	Reinforced Concrete
FOUNDATION WALLS	Concrete Blocks
WATERPROOFING	Integral waterproof cement plaster on concrete blocks (interior), asphalt on exterior
WALL CONSTRUCTION	Frame, with asphalt-coated Celotex sheathing; unpainted Alberta cedar siding on exterior, Pine trim
WALL INSULATION	Reflective metallic insulation
ROOF	5-ply asphalt
TERRACES	Colored cement (ground floor); Deck canvas (second floor)
FLOORS	Basement (waterproof concrete); First and Second Floors (oak); Kitchen (linoleum); Bathrooms and Hall's asphalt tile over plywood)
WINDOWS	Steel casement with bronze screens, DS A glass. Stationary windows are plate glass
INTERIOR WALL FINISH	Recessed edge Sheetrock, taped joints, casein paint.
ELECTRICAL	Special fixtures, fluorescent tubing
HEATING	Hot water, oil burner



AUDITORIUM CHAIR STORAGE



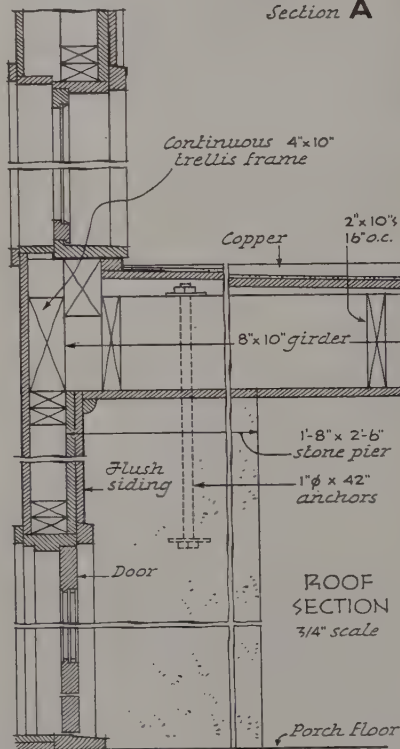
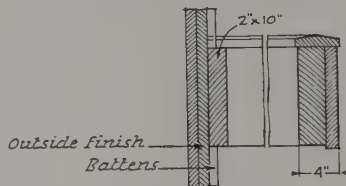
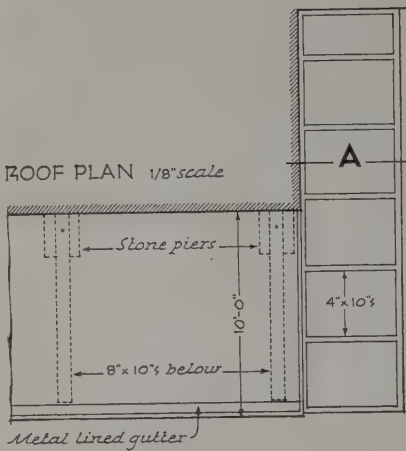
EZRA STOLLER



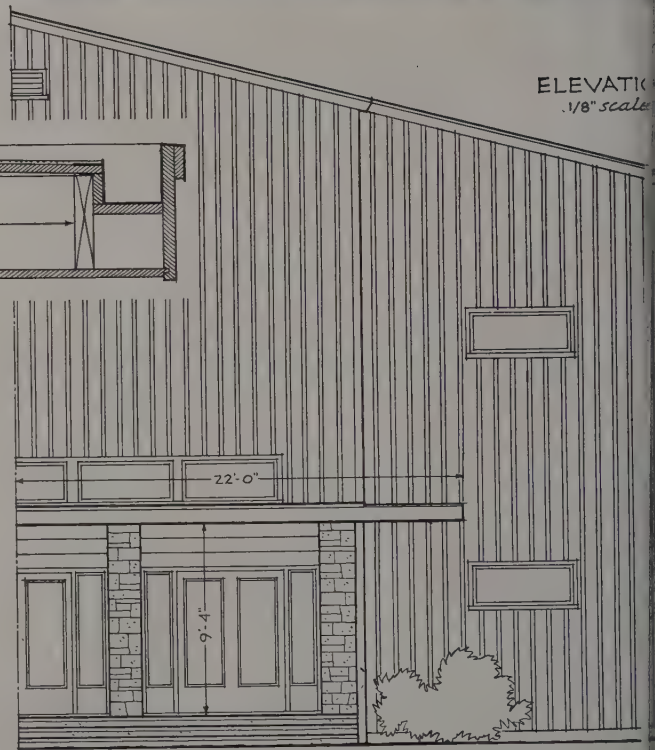
ORNBOSTEL & BENNETT

Designer and Architect

ROOF PLAN 1/8" scale



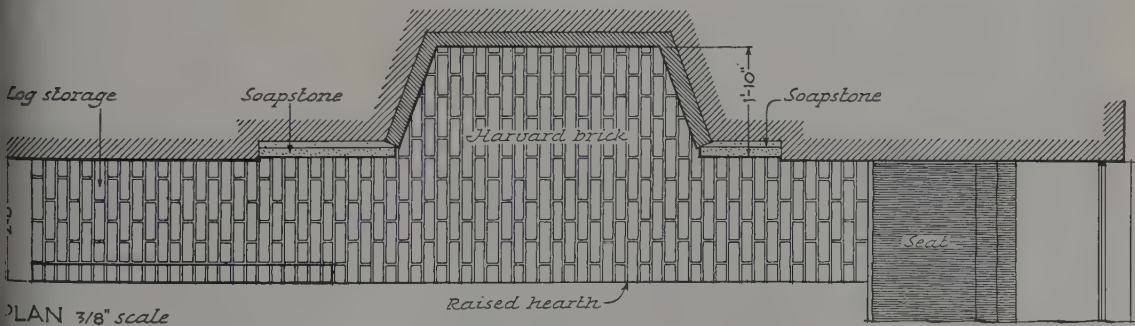
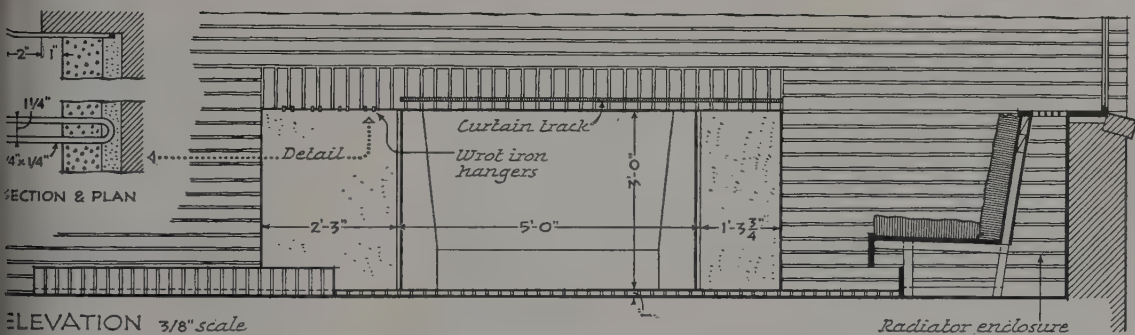
ELEVATION 1/8" scale



EDWIN J. ROBIN
Architect



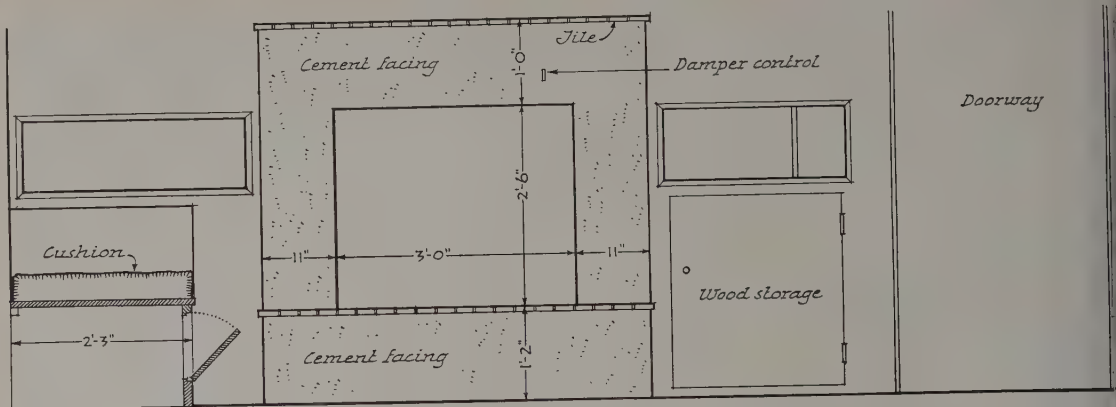
REZRA STOLLER



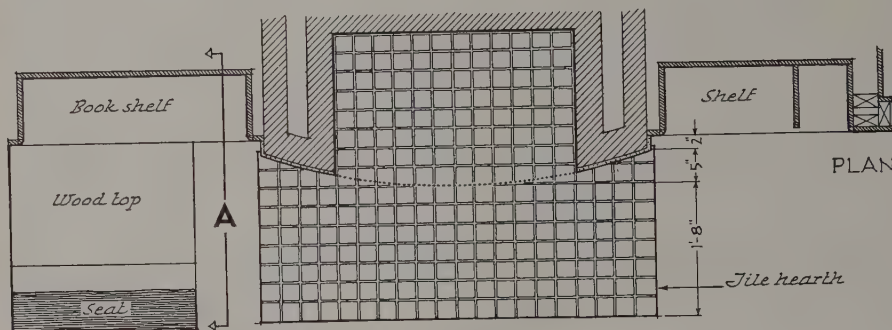
HORNBOSTEL & BENNETT

Designer and Architect

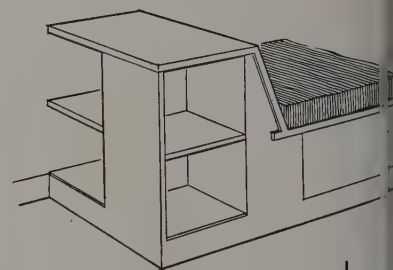
SELECTED DETAILS



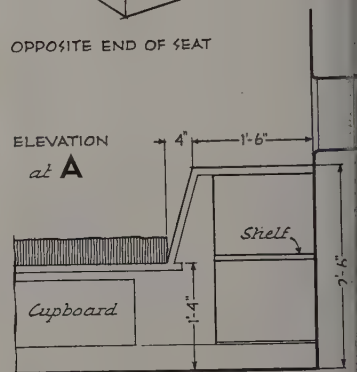
ELEVATION 1/2" scale



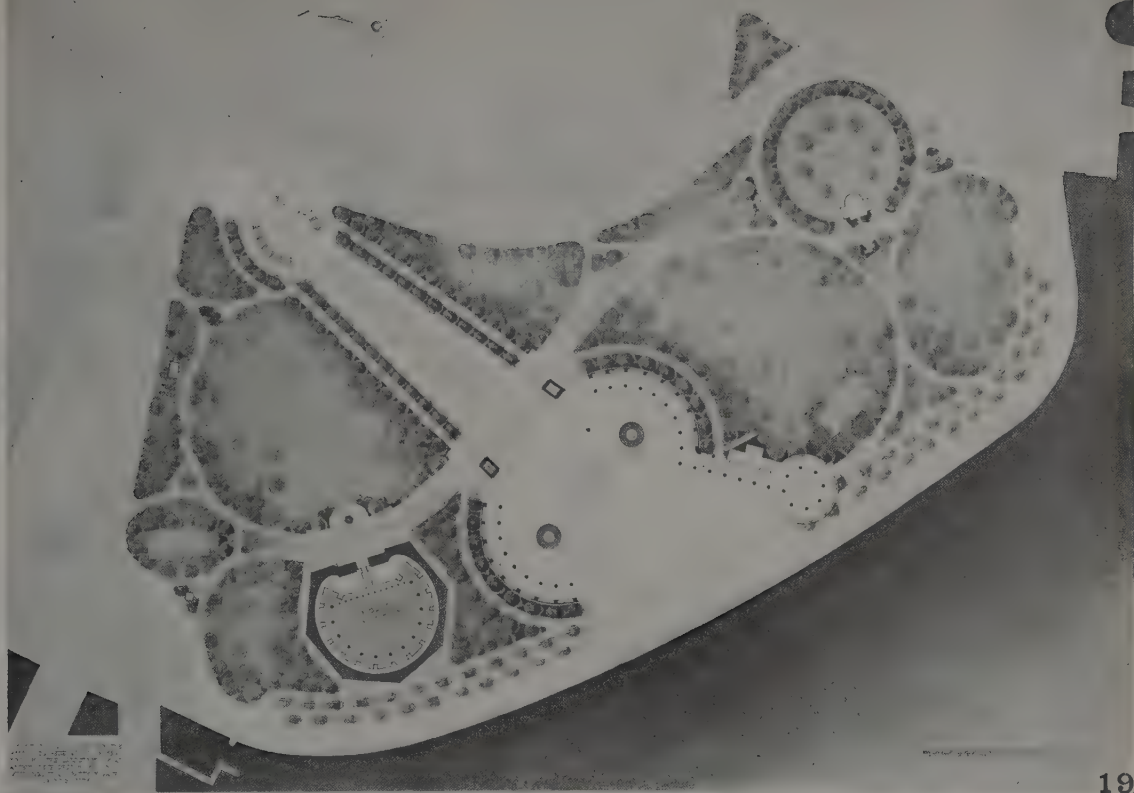
EZRA STOLLER



OPPOSITE END OF SEAT



HENRY R. SHEPLE
Architect



19

THE BATTERY PARK COMPETITION

TALBOT F. HAMLIN

THE basic problems set by the design of Battery Park are simple. Such a park must be an effective foreground to the city, as seen from the bay, and an effective foreground for the magnificent view over the bay as seen from the city. Its other functions are subsidiary or fractional parts and applications of the larger ones. Thus, it should furnish ample seating and promenade space from which the bay view may be enjoyed; it must have pleasant, varied, and natural circulations from street to waterfront, and across from the ferry house to Battery Place; and it must provide a dignified and appropriate setting for Fort Clinton.

There is one other possible function which might affect the design: the possible use of part of the Battery as an official landing place for important city guests. This is an old histori-

ABOVE: This design won first prize of \$500 for Walter W. W. Jones, Brooklyn, N. Y., Architect, in the recently-concluded competition sponsored by the Fine Arts Federation of New York for an "Alternative Design for the Development of Battery Park". (Photograph by Louis H. Dreyer.) The Fine Arts Federation competition was held without authorization from City Authorities and the program did not contain any implication that the design or services of the competition winner would be utilized by the City Authorities. The competition was held as "a contribution of the Fine Arts Federation to the furtherance of civic development and the preservation of historic structures." RIGHT: Department of Parks photograph showing plan model of their design for a new Battery Park.



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More Fine Arts Federation competition winners. ABOVE: Second prize was awarded to the joint entry of the following architects: Philip Sanfilippo, Vito P. Battista, and David Davis. Honorable mentions were given to the designs submitted by the architectural firm of Delano & Aldrich (photograph in adjoining column), and Maud Sargent, Landscape Architect (design across-page). (Photographs of prize-winning designs by Louis H. Dreyer.)

cal function of this area, and several years ago, under the aegis of the Regional Plan Association, some sketches were made with this in mind and the Battery was studied as a monumental gate to the city. Few of the designers in the recent competition seem to have given this possibility much thought, though the designer of the First Prize drawing indicates steps in the sea wall at the main axis of the design.

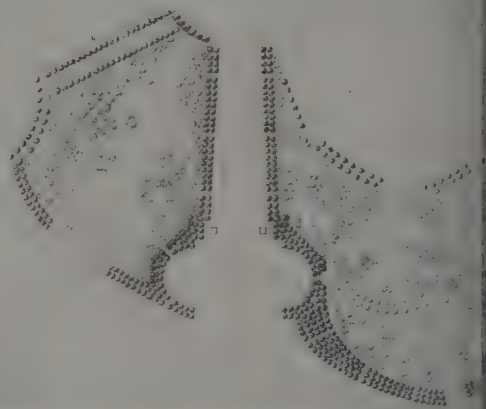
As a whole, the premiated designs show remarkably well many of the characteristics of present-day American park design. So did the published scheme of the Park Department, based on the destruction of Fort Clinton. In all there is apparent an attempt to combine formality with a certain amount of informal lawn and curving walk. In many, what results is not a combination; it is rather a confusion between the ideals of Le Notre and of Humphrey Repton, and almost all the competitors got into trouble trying to connect their serpentine walks with their formal plazas. In this respect probably the best is the Second Prize design, and No. 23 is the most confused.

Another difficulty contingent upon this confusion lies in the treatment of planting—the basic arrangement of lawn and walk and foliage masses. In the First Prize design, for instance, as in Design No. 11, the tree spotting seems, considered in three dimensions, almost meaningless. In Nos. 5 and 23, trees are massed to frame lawn areas of varying size and shape, with considerable success, especially in No. 5; No. 35 attempts more scattered and perhaps subtle effects, but the confusion of straight and curved paths and

their awkward connections confuse the result. Note, for instance, the handling of the large circular eastern area—treated like an avenue on one side, and planted irregularly elsewhere.

All the designs make much of lawn areas. I am no horticulturist, but I do have eyes, and I have seen what happens to lawns in many city parks where usage is intensive. A *tapis vert* with brown holes in it is not pretty. And almost the only really successful lawns in city parks are those which by planning are carefully insulated from public use—like the lawn in the center of Bryant Park. But Battery Park lawns are, by the conditions of the site itself, bound to be traversed often, and though the suggestion that walks be laid out where the lawn was trampled might work on a college campus, for instance, where traffic is generally from door to door, and hence direct, in this case the traffic would be diffuse and the accidental resulting patterns would be visually meaningless.

In New York weather, and under conditions of intensive use such as the Battery receives on summer afternoons and evenings, lawns, it seems to me, should be used only where they may easily be protected by routing the traffic past them without forcing long



departures from the direct and natural line. In this respect no one of the competition drawings is perfect. No. 19, the First Prize, is perhaps the best; No. 5 is good in general until it reaches the Fort Clinton area, where it goes to pieces in aimless wandering and queer dead ends. As a whole the drawings seem to show a too great dependence on the paper shapes as shown on plan. And I think

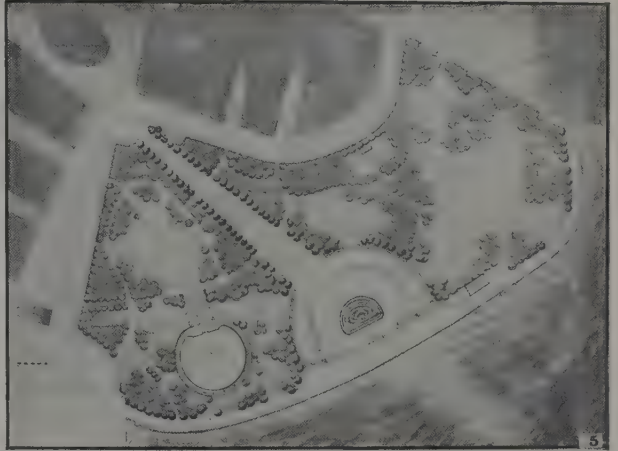
this is true of a great deal of our contemporary park design. After all, people in a park are seldom conscious of the paper shapes; they are conscious of the changing views a path stroll brings them, and of the directness or efficiency of a path in getting them where they are going. From the standpoint of what is in front and around on the paths I feel that No. 23 is the best by far; on any of the paths one would constantly be conscious of little accents or changes to invite one along the way. From the point of view of efficiency No. 19 is superior, though there is confusion and loss of real scale in the bunching of nearly parallel curved walks close to State Street at its eastern end.

All the premiated competitors chose to accent the Broadway axis, and this seems logical and sound. All consequently got into the difficult problem of the "off angle" of the axis and the sea wall. It is a difficult, but not an insoluble, problem which designers frequently face even in buildings. But this problem is so integral with others, such as the use of the shore front, that an analysis of the designs one by one seems the only way to handle it.

The First Prize design, as we have already seen, has many virtues of simplicity and directness. Its handling of Fort Clinton, placed in a polygonal moat surrounded by a walk, is appropriate and effective. The designer has also seen the necessity of emphasizing the waterfront with a promenade on two levels, emphasized by a double row of trees. Staggering the trees, however, is questionable in a case like this; it would spread their shade, to be sure, but it would also close the sense of view too completely. The choice of making the center of the axis a lawn is also excellent, and the framing of the view along the main axis in either direction by two tall ventilating shafts would be as effective in reality as on paper. Nevertheless, the oval at the Bowling Green end seems pure paper architecture; to expect the pattern to hold across the rectangular subway entrance is absurd, and the row of trees which balances the kiosk would merely serve to throw the whole still more out of real visual balance.

But it is in the attempt to relate the axis to the shore line that this design seems to me most questionable. The shelter shown is out of scale, and to expect its eastern side in any way to balance the western, or to produce

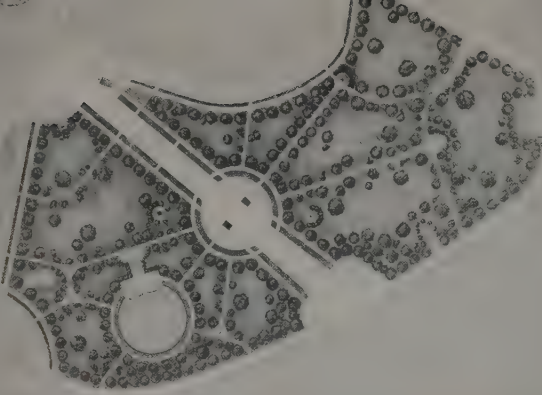
anything but visual confusion despite hemicycles and fountains and rich pavement, is a hope that reality would show completely unfounded. This is especially so because the plaza is so wide, the balancing curves so far apart; compare their size, for instance, with the whole size of the Custom House—no tiny building! The doubled path curving outside the shelters seems artificial too, placed there to give light and shade on the plan, and not for passage, and the whole



intersection of this central element with the shore promenade is awkward and ugly.

No. 23, the Second Prize design, solves these problems with much greater directness. The Bowling Green end of the main axis is handled with a more becoming simplicity, and the frank handling of the shore end is both more realistic and more effective. Yet even here the desire for some sort of paper symmetry has muddled the clarity of the pattern, and the balance of trees on the lower level across the axis is meaningless. How much better to have carried the paired trees of the shore side promenade a little further and ended the promenade simply by broad steps on either side.

Particularly impressive in this design is the careful handling of details, the attractive and meaningful disposition of the existing monuments in the park, and the generally ample yet human scale of the formal portions. With all these merits, it is all the more unfortunate that it is seriously compromised by the single great ventilating shaft on the main axis, closing and complicating the view in both directions! With the memory of the way the colossal statue of Washington effectually wrecked the main axis of the New



11

Harry Leslie Walker, Architect, New York, won an honorable mention for this design, submitted in the Fine Arts Federation competition. (Photograph by Louis H. Dreyer.)

York World's Fair, it is discouraging to come upon the same error again, with perhaps even less reason. Was it not for this, No. 23 would be, of all the designs, the one I prefer.

Design No. 5, an Honorable Mention, is possibly the most knowing of all in the handling of lawn, small path, and trees, as one might expect from the fact that it was designed by a landscape architect. Like No. 19, it sets Fort Clinton in a moat, but the moat has no walk around it and there are few places from which the fort could be effectively seen. The design suffers, too, from a failure to make the most of the waterfront. In its handling of main axis and shore front it is perhaps the most unrealistic of all, for the angle normal to the sea wall is so sharply accented by plaque, steps, flagpoles, planting, and pool that the sudden change to the other angle would be only a shock.

No. 11, another Honorable Mention design, provides perhaps the simplest of all the solutions of the axis-shore-angle problem, but its wide paved areas would be blinding in summer and bleak in winter. It seems to be designed, too, to hide Fort Clinton as much as possible from the rest of the park, and the geometry of its minor paths I cannot, frankly, see the reason for. They seem to make getting anywhere—except to the central circle—difficult rather than easy, and to take little account of actual views or the beauty of the bay.

The other Honorable Mention design, No. 35, has the virtue of being the largest in conception, the firmest in basic pattern, of all those shown. It sacrifices everything to one purpose—the connection of city and bay. Fort Clinton is visible from Bowling Green—but why foundation planting, that curse of American landscaping, around Fort Clinton?

Could anything be less appropriate? A continuous band of trees along the shore promises views over the bay from shady seats. The entrance to the major axis from the city is big, simple, and fine, and the framing of the main axis by double rather than single rows of trees is sound and in the grand manner. Moreover, the handling of the angle of the axis with the shore is competent and sophisticated, and would be effective. But it seems to me there is one basic error in the whole which renders the entire design completely unrealistic—the problem of scale. Battery Park has many uses besides the perhaps occasional one of being a processional way, and for any other use than that of great fetes or parades the vast paved areas of this design would be only oppressive and inhuman, and the great rectangular plaza with its curved ends would be, most of the time, only a glaring and sunbaked loneliness—a place a person would hurry through and away from. The plan is an intellectual abstraction, whereas even Le Notre's plans, however huge, are real.

There is thus not a single one of these premiated plans which I should like to see executed as it stands. With all its virtues the First Prize is full of unrealistic elements which, if built, would not give the effects that the plan indicates. The Second Prize blocks its main axis. And so on and so on. Yet out of them all, by plucking ideas here and there, another design might arise which would preserve the waterfront promenade and shaded seats of Nos. 19, 23, 35; the dignity, human scale, and directness of No. 23; the firm definiteness of No. 35; and the excellent handling of Fort Clinton and the general circulation of No. 19. But, before such a plan could arise, the designer would have to realize the difficulty, if not the impossibility, of combining Repton with Le Notre. He would have to see that the problem of the modern city park is new—one that neither of these great designers ever faced—and that it is futile to look for solutions along the lines they followed. He must start again. That was done in what strikes me as New York's most successful parks—Bryant Park, with its simply patterned formality, and Fort Tryon Park, with its attractive tree-shaded, graveled esplanade with shaded benches overlooking the Hudson. And that fresh approach must be the basis for any successful Battery Park.

STORE FRONTS OF TOMORROW

NEW PENCIL POINTS— KAWNEER COMPETITION

Authorized by Reinhold Publishing Corporation, publishers
of The New Pencil Points, 330 West 42nd Street, New York.
Sponsored by The Kawneer Company, Niles, Mich.
Conducted by William Lescaze, A.I.A., professional adviser;
with Kenneth Reid, A.I.A., assistant professional adviser.

1943

AWARDS. Reinhold Publishing Corporation will pay immediately after the
Judgment the following prizes in cash for the best designs.

FIRST PRIZE	\$ 1,000
SECOND PRIZE	500
THIRD PRIZE	250
Five honorable mentions, each	100

The Kawneer Company, in addition, may purchase any of the unpremiated
submissions for \$100 each.

JUDGES

Frederick Bigger, FAIA Washington, D. C.
Morris Ketchum, Jr., AIA New York, N. Y.
Samuel E. Lunden, AIA Los Angeles, Calif.
Mies van der Rohe, AIA Chicago, Ill.
Roland A. Wank, AIA Knoxville, Tenn.

Reinhold Publishing Corporation, The Kawneer Company, and the Competitors
agree that the Judges' decision shall be final.

All architects, designers, draftsmen, engineers, and students are eligible to
compete, with the exception of employees of The Kawneer Company and
Reinhold Publishing Corporation.

Under a ruling by the AIA Committee on Competitions, Institute members are
authorized to enter this competition.

Competition closes at 5 P.M., January 4, 1943.

PROBLEM

GENERAL

The design of a group of five stores, not in terms of today's knowledge or conditions, but in terms of "after the war" knowledge and conditions. These stores shall be either part of a block in the shopping area of an American city or part of a shopping center in an outlying residential district. They are intended to serve people of low and average incomes, and must be reasonable in cost of both construction and maintenance.

Competitors are urged to base their designs on the use of new as well as of old materials or of new applications of old materials, whichever in their opinion are likely to be most widely used after the war.

COMPETITORS ARE FURTHER URGED TO DEMONSTRATE ORIGINALITY AND IMAGINATION IN THEIR DESIGNS OF THE STORES AND IN THEIR SELECTION OF MATERIALS, WITHOUT ANY REGARD WHATSOEVER TO EXISTING STOCK MOLDINGS AND CONVENTIONAL MATERIALS.

The requirements of the competition are such that in fairness to all competitors no questions should be sent nor will any questions be answered regarding them.

ALL THE FOLLOWING CONDITIONS ARE MANDATORY

REQUIREMENTS

The five stores shall be (a) A DRUG STORE; (b) AN APPAREL STORE (either men's or women's apparel, shoes, hats, or accessories); (c) A GENERAL MERCHANDISE STORE (such as a small chain department store); (d) A RESTAURANT; (e) A FOOD STORE selling groceries, meats, etc.

The five stores are located on the North side of an East-West street, on level ground. The drug store is on the East corner of the store block, the other stores are adjoining it in any sequence the competitors determine.

Respective frontages are as follows: (a) 30'; (b) 20'; (c) 25'; (d) 25'; (e) 20'. Clear height for all stores is 12'-0". The building of which the five stores are a part is either 1 or 2 stories high. In either case, the height of the store front is not restricted. Show windows shall not extend beyond the building line; signs shall not project more than 3'-0" beyond the building line, nor less than 10'-0" above the sidewalk. Awnings shall not be less than 8'-0" above the sidewalk. The width of the sidewalk is 15'-0".

DRAWINGS

All drawings shall be undiluted black ink only, except as otherwise indicated. They shall be on stiff white cardboard or on transparent or opaque white paper, mounted. The size of the board shall be 26" x 36". One inch wide clear margin must be provided all around, but without any border line.

The board shall be composed with its short dimension horizontal, and the title—"Store Fronts of Tomorrow, New Pencil Points-Kawneer 1943 Competition"—made of 1/2" high letters at the bottom. No lettering or numerals shall be less than 3/16" high.

DRAWINGS

1

PLAN of the five stores shall be at $\frac{1}{8}"=1'-0"$ scale. It shall show only the show windows and doors and shall not extend beyond a distance of 25'-0" from the building line into the stores.

2

TWO ELEVATIONS shall be at $\frac{1}{8}"=1'-0"$ scale, one to be a front elevation of the five stores and the other the first 25 feet of the side elevation of the corner store. These elevations shall be in color, in any suitable medium, and shall show cast shadows, one human figure, and one tree.

3

PERSPECTIVE of any one of the five stores so laid out that heights may be measured on the center line of that store front, at $\frac{1}{2}"=1'-0"$ scale. Perspective shall also be in color, with one human figure but without tree.

4

SECTIONS of that store illustrated by the perspective shall be at $3"=1'-0"$ scale. They shall show all relevant details. One is to be a broken vertical section from sidewalk to top of store front and from building line to back of show window, including sash, glass, awning box, transom bar (if any), show window lighting, blocking and structural members; and the other to be a broken horizontal section through show window and door jambs.

All materials must be properly noted on the Sections.

5

FULL SIZE DETAILS. One to be at sill to show glass, glass setting, bulkhead and blocking, and also application of facing material. The other(s) to show trim members such as coping, awning box, etc.

All materials must be properly noted on the Full Size Details.

6

DESCRIPTION. Competitors are free to choose any and all materials, either from those available today or from those expected to be available in the future. Competitors shall list and describe the materials they select, state their reasons for choosing them, and make any other suitable comment.

This description shall be typed on one page, $8\frac{1}{2}" \times 11"$, pasted on the back of the board and shall not exceed 300 words.

No other drawings than those enumerated above will be required in order to be eligible for an award.

ANONYMITY OF DRAWINGS. A plain, opaque, sealed envelope containing a slip bearing name, address, and title (architect, designer, draftsman, engineer, or student) of competitors must be secured with two strips of Scotch Tape to the back of each board, where it will remain until the awards have been made. At that time the envelope will be opened by the Professional Adviser in the presence of the Jury.

Each competitor may enter more than one submission either individually or as a member of a group.

DELIVERY OF DRAWINGS. In order to make it possible for men in military service to enter the competition it will remain open for three months instead of the usual two. Drawings shall be wrapped flat, and addressed to William Lescaze, Professional Adviser, New Pencil Points-Kawneer 1943 Competition, 330 West 42nd Street, New York, N. Y. No other markings shall be on the wrapper. Packages must be delivered at that address or handed to any post office at any time before, but not later than, 5 P.M. on the evening of



JANUARY 4, 1943

Drawings submitted in this competition are at the competitor's risk. Reasonable care will be exercised, however, in their handling, safe-keeping, and packaging for return.

JUDGMENT will be made January 13th, 14th, 15th, 1943. Announcements of awards will be wired to each winner; each competitor will receive by mail the names of such prize winners. All premiated designs and the full report of the Jury will be published in the February issue of The New Pencil Points.

AGREEMENT. All competitors agree that Reinhold Publishing Corporation and The Kawneer Company alone have the right to exhibit or publish any or all submissions; both companies agree to give in such case full and clear credit to each competitor.

All competitors further agree that the submissions winning either prizes or honorable mentions become the property of Reinhold Publishing Corporation. Other submissions shall be returned to their respective authors within a reasonable time, postage and \$50.00 insurance prepaid.



TECHNIQUE USED

The bricks in shadow were drawn with HB and B degrees, while the bricks in sunshine were blocked in with a 5H Typhonite Eldorado. The tree trunk and lantern were given foreground relief with 4B and 5B pencils.

"O, CALL BACK YESTERDAY..."

For centuries the Courtyard in the Temple, located in the heart of London, has been the meeting ground of learned men. Rebuilt in 1680, after the London fire of 1678, it was one of England's most picturesque landmarks until Hitler's Luftwaffe snuffed out its quiet, secluded charm. Today, all that remains of this long-famous courtyard is rubble. Here, Mr. Chamberlain pictures it as it will remain in the minds of the English. Another in a series brought to you by Pencil Sales Dept. 167-J11, JOSEPH DIXON CRUCIBLE COMPANY, JERSEY CITY, N. J.

HOUSING HOT SPOT

The tabulation below, adapted from a table which appeared in the Portland, Oregon, "Oregonian" for October 18, shows the increase in population for which housing is being provided in the Portland area. However, it does not show the total increase in population; the Portland Housing Authority, through its chairman, C. M. Gartrell, said that the stupendous totals shown here are by no means enough, that another 27,000 units, worth some \$40,750,000, are needed to meet requirements.

Add to the more than a hundred thousand new inhabitants, so far provided for, the 60 thousand or so anticipated shortly, and the population increase promises to reach—even to exceed—180,000. What are the cities of the Portland area able to do for these new citizens?

Not much, according to correspondents in Portland. Site

planning and construction are reputedly poor; costs are said to be excessive. The only commendable item to date is apparently speed; some units have been occupied within 30 days of the go-ahead order.

To further confound such confusion as this, the War Production Board has just further restricted the building of schools, community centers and similar facilities, along with all other types of buildings. What is going to happen to such a mushroom community as "Kaiserville," which is planned for 40,000 people—a full-fledged city within a city? Where will its children go to school? Where will be its doctors' offices? What will happen if an epidemic strikes? Mr. Kaiser's policies are to be commended if they give us ships quickly. But such a housing situation is not desirable, even temporarily.

PUBLIC HOUSING IN THE PORTLAND, OREGON, AREA—1942

Location and Name	No. Units	Type	No.* Workers	Total† No. Persons	Const. Started	Const. Cost	Probable Completion	Architects
PORTLAND								
Columbia Villa	400	Permanent Houses	572	1,200	May 5	\$1,312,000	Nov. 30	Stanton & Johnston
St. Johns Woods	967	Temporary Houses	1,328	3,000	May 28	3,220,000	Nov. 25	Lawrence, Holford & Allen
Parkside Homes	260	Temporary Houses	371	780	May 21	871,140	Nov. 15	Johnson, Wallwork & Dukehart
Guild's Lake Ct.	358	Temporary Houses	511	1,074	May 14	1,092,443	Nov. 10	Whitehouse & Church
HudsonSt.Homes	118	Temporary Houses	168	354	May 21	355,000	Nov. 6	Herzog & Tucker
Fir Court	72	Temporary Houses	102	216	May 21	235,500	Nov. 6	Barrett & Logan
Gartrell Units	725	Temporary Houses	1,036	2,175	May 7‡	Estimated 1,700,000	Nov. 15	(see below)
Univ. Homes	2,000	Temporary Apts.	2,860	4,500	July 6	4,500,000	Oct. 20	A. E. Doyle & Assoc.
Dekum Ct.	85	Permanent Houses	121	255	—	265,000	Complete	Narramore & Assoc.
Kaiserville	9,280	Temporary Apts.	13,270	40,000	Sept. 14	25,000,000	Feb. 14, '43	Wolff & Phillips
Mt. View Ct.	100	Trailers	143	300	Aug. 8	166,188	Complete	—
CLACKAMAS								
Kellogg Pk.	600	Temporary Houses	858	1,800	June 4	1,756,000	200 on Nov. 15 200 on Dec. 1 200 on Dec. 15	Stokes & Jacobberger
Hillside Pk.	100	Permanent Houses	143	300	Nov. 1941	295,000	Complete	Roi L. Morin
Clackamas Hts.	100	Permanent Houses	143	300	Jan. 26	235,000	Complete	Roi L. Morin
VANCOUVER								
Hudson House	4,000	Temp. Dormitories	5,720	5,720	—	Approx. 4,500,000	Completed in 50 days	Wolff & Phillips
McLoughlin Hts.	4,000	Demountable Houses	5,720	12,000	Apr. 27	16,463,600	Oct. 25	(see below)
Ogden Meadows	2,000	Temp. War Apts.	2,860	6,976	July 1	4,863,000	50 due by Aug. 17	Wolff & Phillips
McLoughlin Hts.	500	Permanent Houses	715	1,500	Aug. 3	3,724,000	Dec. 3	Stewart & Hilburn
Fruit Valley	300	Permanent Houses	429	900	Aug. 3			
4th Plain	200	Permanent Houses	280	600	Aug. 3			
Not named	4,800	Temporary Apts.	6,864	14,400	not started	10,800,000	—	A. E. Doyle & Assoc.
Not named	1,200	" Row Houses	1,716	3,600	not started	2,500,000	—	(see below)
Not named	1,000	" Dormitories	1,430	3,000	not started	2,250,000	—	Wolff & Phillips
Not named	586	" Row Houses	839	1,758	not started	1,318,500	—	—
Adm. Center	—	(see below)	—	—	Oct. 20	350,000	Dec. 20	Roi L. Morin
TOTALS	33,751		48,199	106,708		\$87,772,371		

NOTES:

Administration Center includes Office Building, Community House, Clinic, 20-acre Playground, Maintenance Shops, and Fire Station.

ARCHITECTS — Gartrell Units: Margaret Fritsch, Richard Sundeleaf, Dougen & Heims, Herman Brockman, R. D. Kennedy, Wade Pipes; McLoughlin Heights: A. E. Doyle & Associates, Roi L. Morin, Day Hilburn, and Don Stewart; Unnamed Project: Stanton & Johnston, Day Hilburn.

*Based on Federal estimates of 1.43 workers per unit (including sons, roomers, relatives, etc.)

†Based on Federal estimates of 3 persons to each worker's family.

‡First 13 units started on May 7; others started as contracts awarded.

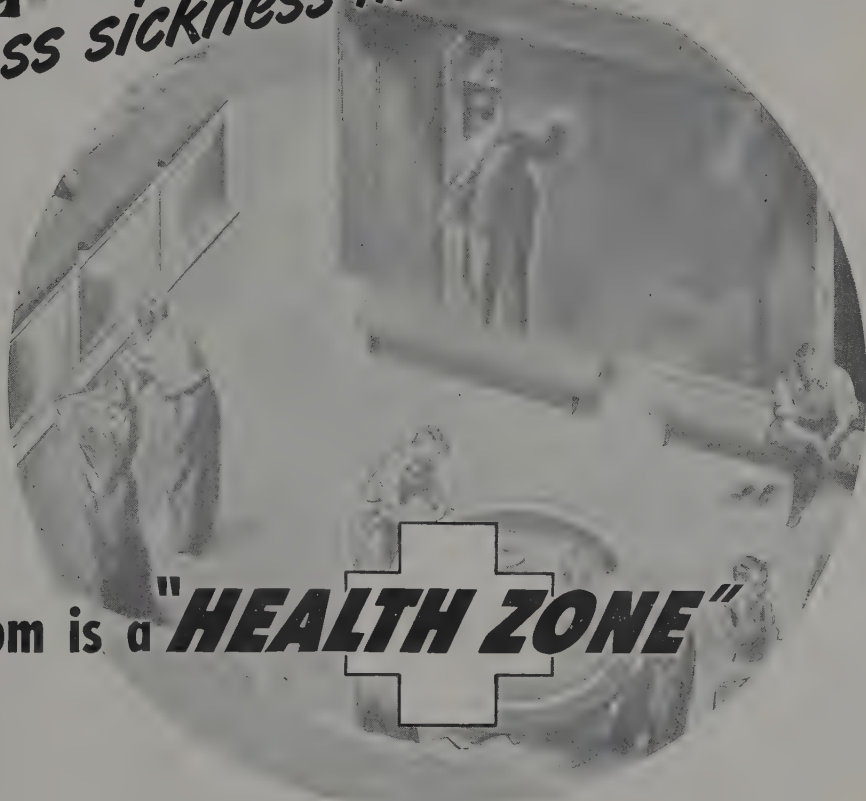


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...because

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TIME LOST through illness among industrial workers amounts to millions of man-hours every year.

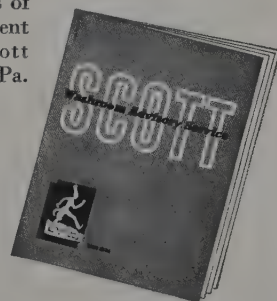
It is a fact that much of this appalling waste can be prevented through proper health programs. Your clients know that the spread of many common contagious diseases among employees can be greatly reduced by providing modern, sanitary washrooms, with plenty of hot water, soap, and individual tissue towels. They realize that every clean, well-equipped washroom is literally a "health zone."

Such washroom facilities must be planned as an essential part of the plant. The num-

ber needed should be accurately estimated, locations chosen for maximum convenience, and all fixtures placed to insure efficient use and a smooth flow of traffic.

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ADVISORY SERVICE

BOOKS and PERIODICALS

THE BOMBED BUILDINGS OF BRITAIN, edited by J. M. Richards, with notes by John Summerson. (140 pages, 8 1/4" x 11 1/4", illustrated, \$3.75. The Architectural Press, Ltd., 45 The Avenue, Cheam, Surrey, England.)

This book, unlike many others which illustrate air raid scenes, puts on permanent record the damage done in the

now historic blitzes of 1940-1941 to notable buildings throughout England. The lost architectural masterpieces of Britain are systematically illustrated, from little-known churches to Wren's city churches; from fine Georgian houses in Hull, Plymouth, and Coventry to the House of Commons.

The book is replete with photographs (taken after the bombings) accompanied by notes about the architectural character and history of each

building, as well as a series of small prints and engravings in their original state, so that the whole forms an informative summary of the different phases of English architecture.

The book is divided into nine sections. The first is given to London; the six shorter sections that follow it to the provincial cities (Bristol and Clifton, Coventry, Portsmouth, Plymouth, Manchester, Liverpool) that suffered most severely. A section is devoted to other cities collectively where architectural losses have not been so great as to warrant their being given a separate section each. The final section is devoted to damage done outside the big cities. Within each section the buildings are grouped first according to type (churches, public building, domestic, etc.) and then, as far as possible, in order of date.

THE OLD BAY PATHS, by George Francis Marlow, with photographs by Samuel Chamberlain. (\$2, 126 pages, maps, 5 1/2" x 8 1/4". Hastings House, 67 W. 44th St., New York.)

The historic network of highways between Boston and Hartford, known as the Bay Paths, has seen the throes of struggle between the early settlers, Indians, colonists and the British, and the evolution of the tasteful living of New England culture. Parts of the old Indian trails which became the original Bay Paths are now broad, concrete highways; parts are old gravel roads, still undefiled by oil or tarvia; other parts are abandoned wood roads; still others are known but to the veteran hiker. The lover of early New England history will find this charming little volume a guide to all of them.

Mr. Marlow's understanding text and Samuel Chamberlain's fifty-two magnificent photographs picture some of the historic landmarks which still survive along the course of these old Bay Paths, and take the reader along forgotten byways, recapturing the placid and charming background of a stirring past.

SILK SCREEN COLOR PRINTING, by Harry Sternberg. (\$2.50, 78 pages, illustrated, two color plates. McGraw-Hill Book Co. 330 W. 42nd St., New York)

The recent publication of a work book on silk screen color printing should be most welcome to those who would like to experiment with this new process. Harry Sternberg, the author, is well qualified to present this new print technique, as he has been closely identified with its growth from the very beginning.

(Continued on page 84)

CUT FUEL BILLS STOP DRAFTS AND LEAKS



BANKS—One of 12 National City Bank Bldgs., New York, caulked with Pecora.



CHURCHES—National City Christian Church, Washington, D. C., one of a host of churches of all denominations weather-tight with Pecora.



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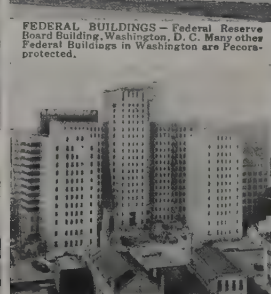
FEDERAL BUILDINGS—Federal Reserve Board Building, Washington, D. C. Many other Federal Buildings in Washington are Pecora-protected.



MEMORIALS—DuPont Carillon, as well as Thomas Edison and Will Rogers towers Pecora-protected.



STORES—This A & P Store in Penna., one of many store and theatre buildings Pecora-protected.



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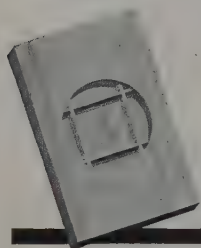
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Middletown Housing Project. Geo. Howe, Architect

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BOOKS AND PERIODICALS

from page 82

Its value in the industrial and commercial field is as clearly explained and illustrated as is the later development into the esthetic realm of the fine arts. Experienced artists will appreciate the directness of his explanations and the thoroughness with which he considers the use of materials and the making of needed equipment.

These basic essentials with which to work are followed by a final step-by-step demonstration of how an artist may create his own interpretations through this method. Along with the publication of the book comes recognition of this new medium's value from such sources as museums, artists, and art educators. The name serigraph (*seri*—meaning silk; *graph*—to draw) distinguishes silk screen color printing from other printing processes. It was suggested by Carl Zigrosser, who arranged the first public showing of the prints.

R.W.N.

PERIODICALS

UNITED STATES

THE AMERICAN CITY

Of significance in the September issue are several articles on city replanning. Rochester and Buffalo, N. Y., and San Francisco activities are summarized. Legal difficulties under the New Jersey "Master Plan" are discussed.

ARCHITECT AND ENGINEER

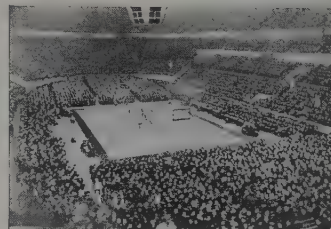
In this well-rounded issue (September) are a presentation of a new Los Angeles housing project, a discussion of wartime changes in design methods, a report on the status of architectural scholarship as reflected by Columbia University's library, a description of the Washington, D. C., airport, and several minor articles. In his discussion of architectural and structural design, Antonin Heythum points to the use of "cutaway" drawings to supplement plans, sections, and elevations, as an example of changing techniques made necessary by the use of unskilled labor, unfamiliar with blueprints, on war projects.

CALIFORNIA ARTS AND ARCHITECTURE

Perhaps nowhere else in the country has so much public acclaim been given designers who dare to be free as on our West Coast. The September issue seems, again, to present the best work of the best modernists in a stimulating manner. Another Saarinen—Lil-

(Continued on page 86)

Better FLOOR DEFENSE WITH HILLYARD Floor Treatments AND Maintenance Products



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BOOKS AND PERIODICALS from page 84

lian Swann Saarinen—is represented by photographs of her sculpture; J. R. Davidson, Paul Laszló, Sumner Spaulding, Richard Neutra, Adrian Wilson, and Theodore Criley, Jr., are the designers of architectural projects published. Add to this roll articles on the camouflage, the theater, and notes on the arts, and the complete magazine becomes a stimulating, provocative report on the status of a genuine regional culture.

NEWS

PRINCETON PLANNING SURVEY

The Bureau of Urban Research, Princeton University, recently released the results of its first nationwide survey of American cities and city planning, in which urbanites expressed their opinions about city improvement. The outstanding problems facing cities, points out the survey, are the lack of good, reasonably-priced housing, transportation, traffic congestion, local war-time problems, lack of employment opportunity, and the inadequacy or dishonesty of municipal governments.

CITY PLANNING COURSE

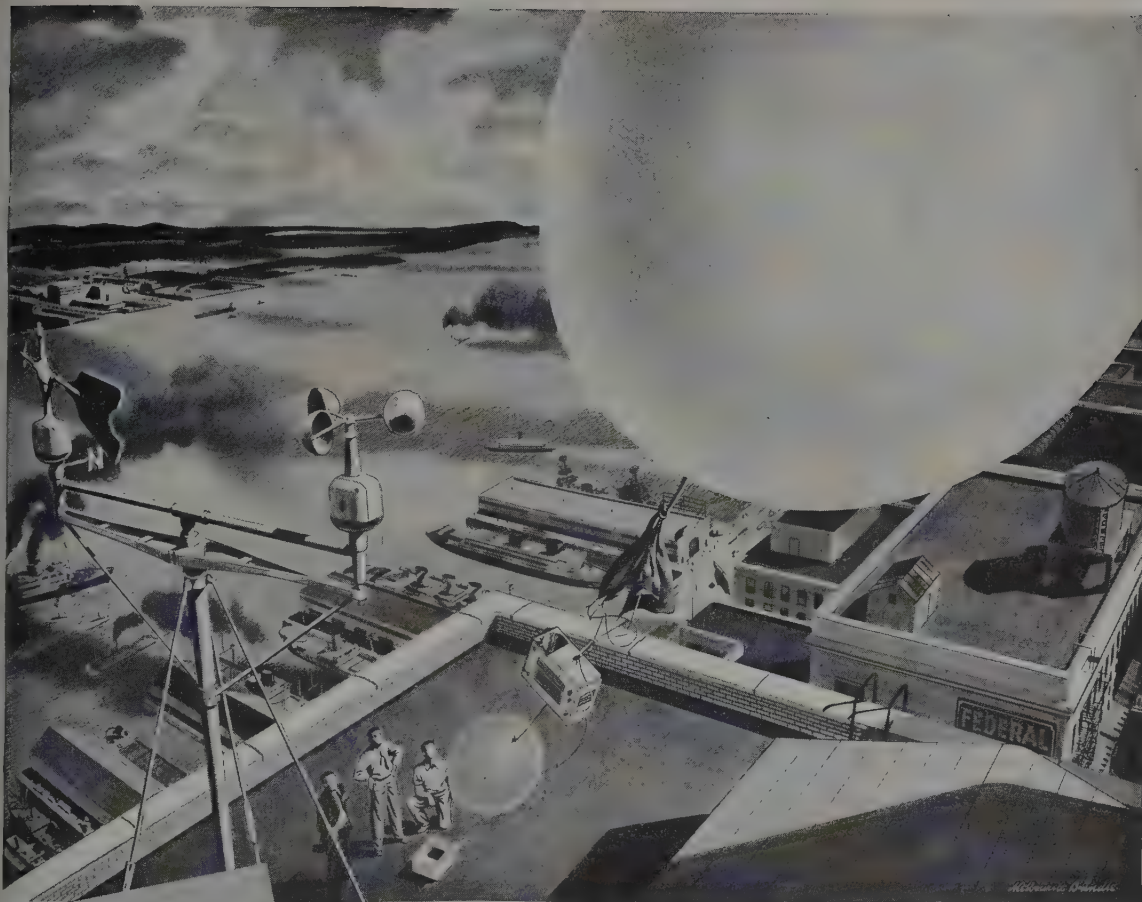
A city planning course in which students will plan a transportation center for the town of Syosset, Long Island, under the guidance of the engineering, architecture, and social science faculties, has started at Cooper Union, New York, under the direction of Dr. Edwin S. Burdell. Architectural and engineering students will pool their knowledge in an attempt to solve the problem created by an influx of war workers into Syosset, where rail, bus, and car lines are widely separated.

MASSACHUSETTS REGISTRATION

Of the estimated 1200 eligible architects in Massachusetts, approximately 300 have registered to date with the State Board of Registration of Architects, according to John T. Whitmore, chairman of the Board.

Independent architects with five years of practical experience may register without an examination. Persons having eight or more years of experience in the office of a practising architect may register after an oral examination by the Board. Recipients of degrees from accredited architectural schools may register after three years of practical experience.

After January 1, all architects must take a written examination before registration is accepted.



**WEATHER
FORECAST:—**

**2,000 DAYS WITH RAIN OR SNOW,
AND 4,000 DAYS OF SUN**

TODAY, the weather man's sounding balloon, carrying instruments ten miles or more into the upper air, makes possible forecasts of tomorrow's weather with an accuracy undreamed of in the past . . . But what of the long-range prospects?

On the basis of weather averages for the past 50 years, the roof on a building in New York City today can expect nearly six years of daily rain or snow, and eleven years of sunshine during the next 20 years. In St. Petersburg, Florida, the sun will shine on all but 100 days of the next 7,305, while in some sections of this country, a plant roof covering an acre in area can expect 454,000 tons of water to fall upon it.

America is a country of weather extremes, yet one roof has been found to give dependable, trouble-free service under all weather conditions. It is the Barrett Specification* Roof.

These famous roofs offer a degree of

certainly in performance that is almost unparalleled in the building field. They are built up of alternate layers of pitch and felt with a fire-safe gravel or slag wearing surface, applied according to Barrett specifications by Barrett Approved Roofers. They take Fire Underwriters' Class "A" rating, and they are bonded against repair and maintenance expense for periods up to 20 years.



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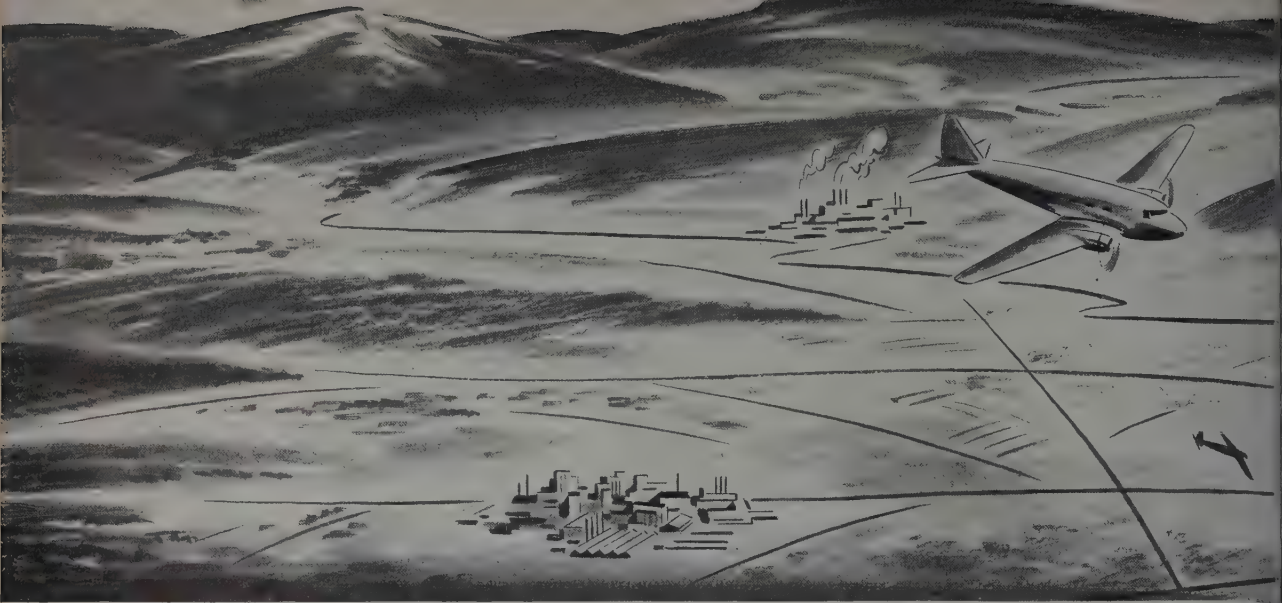
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THE FIRST FIVE YEARS OF PEACE

may be tough for some towns and cities

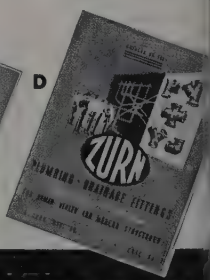
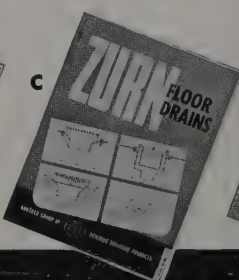
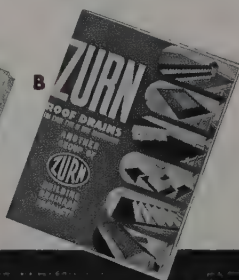
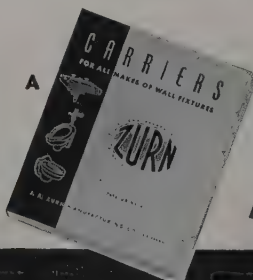
The prospect of a decentralization of industry and housing intrudes upon the thought of anyone who contemplates the physical and financial situation which confronts many towns and cities. Both industry and housing have a common stake in decentralization. The solution of industry's problem may bring the solution of the housing problem. In the post-victory period industry and housing may find it feasible to work together to further a movement away from urban centers into localities of decentralized industry, living, and employment.

Decentralization of industry and housing may compel the replanning and rebuilding of urban centers of population from which this movement may emanate. And, decentralization will present opportunities to smaller towns and cities for which they must immediately prepare if they are to become the benefactors of this process. The need is for research and planning by all sizes of cities and towns. Is it not logical to prepare now to attain the things for which we fight a war? Winning the peace may depend upon how well we prepare now to meet the conditions of peace. The

time may be short. The first five years of peace may be tough on some towns and cities.

Research and planning for the rebuilding of a town or city requires trained talent such as architects and engineers and professional town and city planners. The specific task is to lessen the number of "ghost towns" in the post-victory period. Replanning must include practically everything related to the physical and financial makeup of a town or city. Among the many sources from which factual information on these subjects may be obtained are these: National Resources Planning Board, National Planning Association, American Society of Planning Officials, Federal Housing Administration, Federal Works Agency, and many others.

Many cities and towns are already engaged in researching, organizing, and planning the future town and city. The experience provides guidance for all those who are now ready to undertake this work or enlarge upon work already under way. A phase of this work of growing importance is how to organize it so that government agencies, private industry, and organized labor may cooperate and produce a post-war



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prosperity and security. Someone in each community must become inspired to undertake this work and live it. This is work that may well initiate a new pattern of living that in turn may change the face of both industry and society. Our purpose is merely to induce and encourage the replanning of towns and cities.

By urging you and your talented fellow citizens to replan your community for the rebuilding of it in the post-victory period, Zurn is performing one of its responsibilities of leadership. Another responsibility of leadership is being fulfilled by our research and engineering activities which keep us in touch with a great deal of what is being accomplished along replanning lines. Factual information which we have collected from contact with organizations, commissions, and agencies that are active in replanning for rebuilding is available to you on request. You are also invited to send for our portfolio entitled "A New Era For Building is Only Marking Time."

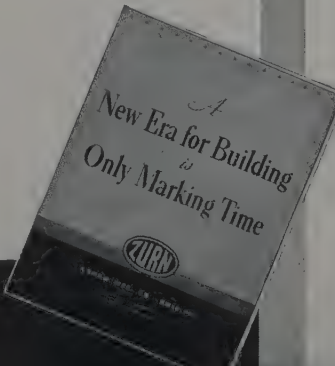
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ENGINEERS in their specialized field are on the alert, researching, inventing, designing to meet new needs that urban reconstruction will require. They are making and testing one device after another in a continuous endeavor to improve building and plumbing drainage systems. Their job is to supply Engineered Protection for human health and modern structures. Not for one moment are they in any way neglecting the performance of a vital service to the winning of the war. Indeed, they are helping to speed the construction of war production plants and housing for war workers and ships to solve our transportation problem. But to neglect the development of new devices for a new era of building would be unthinkable. While at war, we should prepare for peace.

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Please register my name and the names of individuals and organizations attached, to receive a copy of the portfolio entitled, "A New Era For Building is Only Marking Time," of which I understand a limited number will be available when printed.

Name Position

Company

Address

City and State

Form No. 4228

P. S. Please attach to your business letterhead

ROOF TO BASEMENT



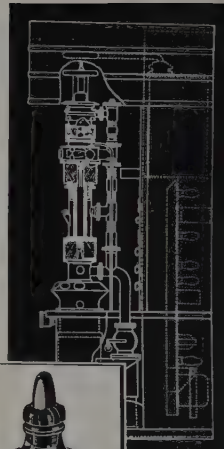
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★ **CHARLES MAGRUDER** ★
Charles Magruder, who has been Managing Editor of *THE NEW PENCIL POINTS* since 1938, resigned his position recently to join the Corps of Engineers, United States Army. He carries with him the best wishes of his associates and his many friends in the architectural field.

PRATT COURSES

The Department of Architecture at Pratt Institute, Brooklyn, N. Y., will continue this year to offer free government courses in aerial bombardment protection under the war training program of the U.S. Office of Education. The new lecture series started November 10.

DRAFTING COURSE

A course in topographic drafting, to prepare qualified men and women especially for service with the National Defense Mapping program, opened at Columbia University, New York, on November 10. Minimum requirements are graduation from high school with two years of mathematics. Preference was given to applicants with experience in drafting or art, and to those with college training.

ASA STANDARDS

Two American standards, one governing requirements for installation of gas-burning equipment in power boilers (ASA No. Z21.33-1942), and the

other governing listing requirements for gas valves (ASA No. Z21.15-1942) have been approved by the American Standards Association, 29 W. 39th St., New York. The first of these standards, developed under the leadership of the American Gas Association, covers such requirements as installation of burners and controls, gas piping and meters, inspections and tests, as well as boiler room ventilation, accessibility for cleaning and inspection, and flues and flue connections.

The approved Standard listing requirements for gas valves includes such construction requirements as dimensions, materials, compensation for wear, gas burner valves with adjustable orifices, etc.

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SERVICE SHEET R-1 gives you quick facts on 8 types of Richmond Kalamein Doors—both flush and paneled.

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As a stimulus to better design in hardware for building post-war America, READING has invited members of the profession to submit hypothetical designs embodying their ideas on builders' hardware.

If you have seen any of these designs, as they appeared in print, you know that some highly original and provocative ideas have been presented.

We would like to send you a collection of the first six units of this design series in a practical portfolio indexed for ready reference. Additions to the series will be sent from time to time. For your copy write today to Department P.

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ALMOST as fatal as a bullet or a shell is the breakdown in the spirit of a sailor or a soldier.

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Life in our navy and army is hard. Discipline is tough. It must be. But there also must be moments when the sailor or soldier is treated as Mr. Somebody-or-other.

That's where the USO comes in. For the USO is the banding together of six great agencies to serve one great purpose—to see that our boys in the camps

and naval stations have a place to go, to turn to, a "home away from home."

The duties of the USO have more than doubled during the year. Its field of operations has enlarged to include almost the entire face of the globe.

To carry on its all-important work, it needs funds. It needs your contribution. No matter how small you make that contribution, it needs it. *Now*.

You are beset by requests for help on all sides. By all means, try to meet those requests. But among them, don't neglect the USO.

Send your contribution to your local USO committee, or to USO, National Headquarters, Empire State Building, New York.

Give to the USO

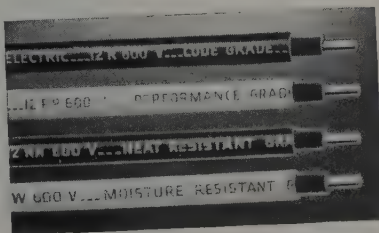
G-E Wiring Material News

MONCOR Surface Wiring Devices



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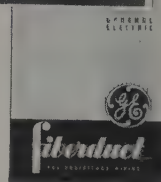
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Catalogs on POWER DISTRIBUTION SYSTEMS

Here are catalogs on two different under-floor distribution systems. Both systems make wiring extremely flexible. G-E Fiberduct is a fiber raceway for installation in concrete floors. G-E Q-Floor Wiring is used in cells of H. H. Robertson cellular steel Q-Floors. Outlets can be installed in the raceways wherever they are needed at any time with both systems.



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MANUFACTURERS' LITERATURE

Publications mentioned here are all 8½" x 11" unless otherwise specified, and will be sent free of charge, upon request. When writing for any of the literature noted here, please mention the NEW PENCIL POINTS.

Air Conditioning. Complete catalog, divided into sections containing individual bulletins on every phase of air conditioning, available from McQuay, Inc., 1600 Broadway, N.E., Minneapolis, Minn. Sections are devoted to refrigeration, air con-

ditioning, cooling coils, heating coils, unit heaters, convectors, and accumulators for off-peak refrigeration storage. Each bulletin contains specifications, technical data.

Metal Mesh. 1942 edition of the Steelcrete Handbook, 96 pages. The handbook is divided into three sections—photographs and descriptions of Safe-T-Mesh, flattened meshes, and Steelcrete walkway mesh, skywalk mesh, other products. Shown also are the firm's drafting room standards which include con-

struction details for partitions, window and door guards, radiator guards, etc. The standards (enlarged copies of which may be had on request) also show detail dimensions of certain framing members and fittings. Consolidated Expanded Metal Co., Wheeling, W. Va.

Hardware. Portfolio of hardware designs by leading architects. The collection of the first six units of this hypothetical design series is indexed for ready reference. Additions will be sent from time to time. Reading Hardware Corp., Dept. P., Reading, Pa.

Doors. The use of rolling wood doors to save steel in the construction and maintenance of all war facilities is pictured in a 4-page folder recently issued by the J. G. Wilson Corp., 370 Lexington Ave., New York.

Glass Block. Six page folder describes step-by-step construction of Insulux prefabricated wood members for erecting glass block partitions. Owens-Illinois Glass Co., Toledo, Ohio.

Planning File. Purpose of this Home Planning File is to furnish a connecting link between the deal-



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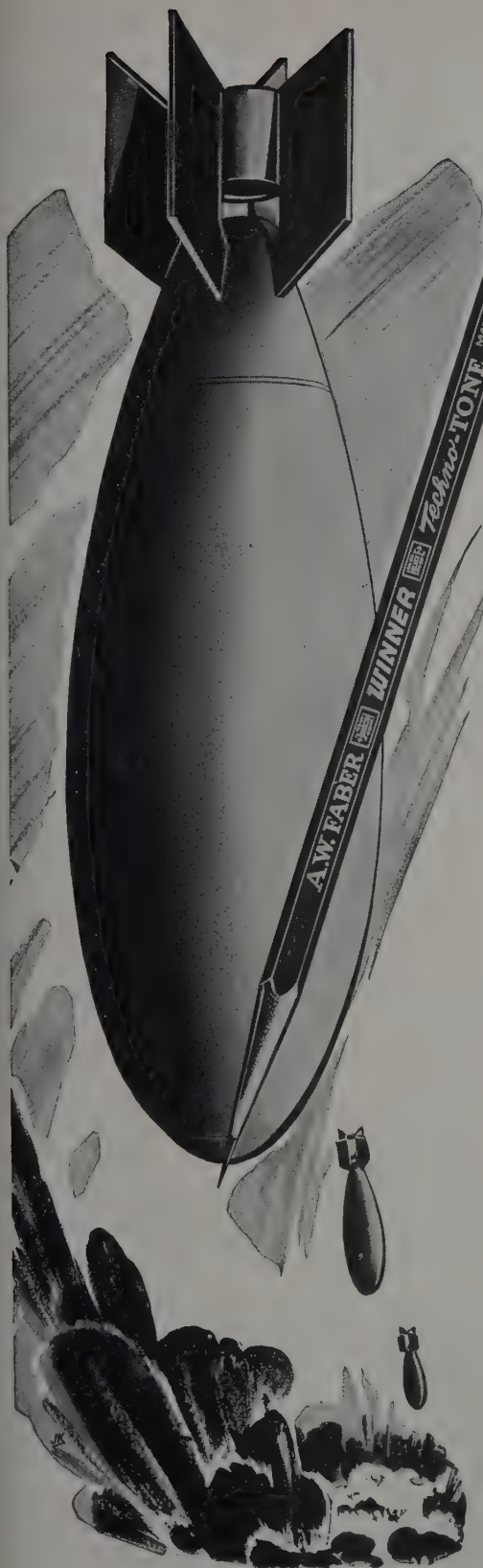
AIR DIFFUSERS

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IN SWEET'S



er and the prospective home builder whose purchases of War Bonds are earmarked for payments on the home he plans to build after the war. Ten folders in the file are labeled to provide an organized file of clippings, sketches, and notes on various phases of homebuilding. Another folder is provided for keeping War Stamp books and recording Bond purchases. Available to dealers at \$25 per hundred. Edison General Electric Appliance Co., Inc., 5600 W. Taylor St., Chicago, Ill.

(Continued on page 96)



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Circuit Breakers. 15,000 volt oil circuit breakers (Classes 150-TCR-3 and 250-TCR-3) for indoor service are described and illustrated in a 12-page catalog, No. 3350, available from Roller-Smith Co., Bethlehem, Pa. Listed are the various sizes of breakers with their interrupting ratings, closing and tripping currents, amount of oil required, and approximate shipping weights. Control diagrams, methods of tripping, and dimensional data also are given.

Corrosion. Bulletin No. 1620, 16 pages, contains complete technical and engineering data on Tygon, a synthetic product which possesses the corrosion-resistant qualities of chemical stoneware and the physical characteristics of rubber. From the Tygon series of resins, compounds can be formulated, possessing a wide range of physical characteristics, which will resist virtually any corrosive. The bulletin describes its physical characteristics, specific applications, and fabric impregnation. United States Stoneware Co., 60 E. 42nd St., New York.

Ballasts. Bulletin 421-FL, 12 pages, from Jefferson Electric Co., Bellwood, Ill. Specifications, dimensions, wiring diagrams on single, two-lamp, and three-lamp ballasts for fluorescent lamps. Also, descriptions and illustrations of Jefferson fluorescent lamp switches.

Waterproofing. 12-page booklet, "How to Waterproof Concrete, Stucco, and Masonry." Medusa Portland Cement Co., 1000 Midland Bldg., Cleveland, Ohio. Booklet explains how lack of waterproofing causes water damage in buildings, various methods of waterproofing, and the advantages of integral waterproofing. Specifications for waterproofing included.

Heating. "Packaged" Oilbilt, a self-contained, oil-fired, steam generating unit with a guaranteed thermal efficiency of not less than 80%. Specifications, tables, layouts. 12 pages. Cleaver-Brooks Co., 5100 N. 33rd St., Milwaukee, Wisc.

Oil Heat. Fifty-two ways of conserving fuel and heat are contained in a 32-page booklet, 6 1/2" x 10", "How to Save Fuel Oil," available from the Petroleum Industry Committee, 624 S. Michigan Ave., Chicago. Many of the suggestions apply to heat conservation regardless of type of fuel used.

Unit Heaters. Catalog U42, from Reznor Mfg. Co., Mercer, Pa., contains information on gas-fired, suspended unit heaters of the fan, blower, and duct types. 12 pages. A 4-page folder contains prices, dimensioning data. Also available is a 6-page folder, Catalog No. AFA-41-A, which gives specifications and engineering data on the firm's automatic, gas-fired, forced air heater.

Flooring. Low cost floors for war housing are described in a 24-page, 10 1/4" x 13 1/2" catalog issued by E. L. Bruce Co., Memphis, Tenn. Illustrated are typical installations of the firm's Streamline flooring—a factory-finished hardwood flooring available in various sizes, finishes, woods, grades, and lengths.

Color Cards. Set of 65 color cards showing the standard finishes available on its metallic doors. Cards are in a heavy paperboard container. Dahlstrom Metallic Door Co., Jamestown, N. Y. Finishes available include 44 plain enamel colors, 9 metallic colors, 6 stippled colors, and 6 grained wood colors.

(Continued on page 98)

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Sullivan A. S. Patorno is one of the leading Consulting Engineers in the East. His organization, which handles mechanical and electrical engineering work, has acted as consultants for the New York City Housing Authority on several projects, among which was the Fort Greene Houses development in Brooklyn, N. Y. They also have been consultants for the New York State Housing Authority and on many U. S. Government defense projects. Mr. Patorno has specified Petro equipment for many years, and adds these comments on oil burning equipment:

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The engineering of the system's installation supplements, and makes effective in operation, the excellences built into the equipment by the manufacturer. And this careful pre-planning service is being rendered today as fully and effectively as ever on every installation which existing restrictions permit.

The commendation quoted above, while based on the extended experience of one large office, truly reflects the far greater aggregate experience of the thousands of operators of Petro systems.

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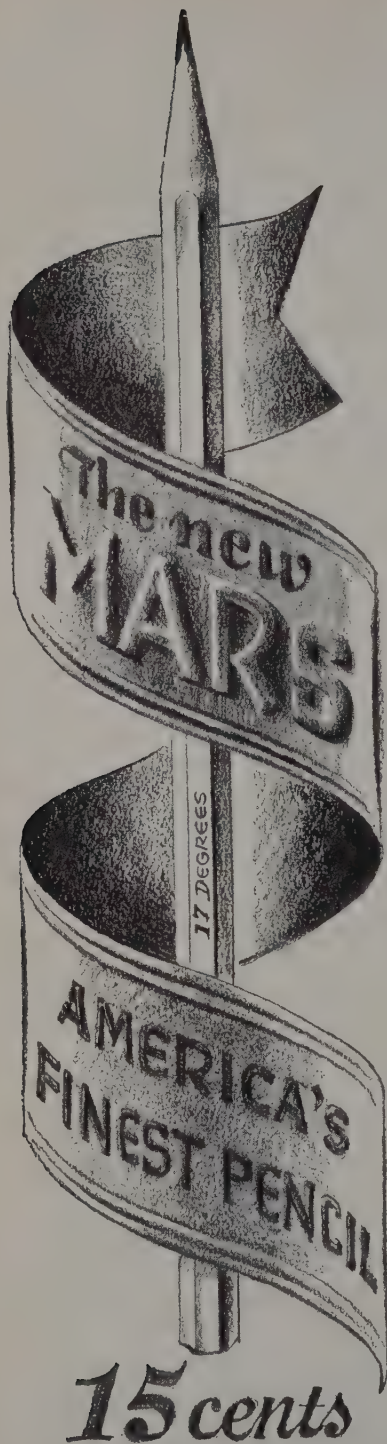


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MANUFACTURERS' LITERATURE from page 96

Control. Detailed information on compensated control for zone temperature control work, suitable for use in new and existing buildings, is contained in a 2-page bulletin from Barber-Colman Co., Rockford, Ill. Compensated control systems differ from other heat thermostat installations in that heat anticipation is provided only when needed and in the amount required by a particular weather condition.

Electrical. Bulletin No. 67, 7 $\frac{3}{4}$ " x 10 $\frac{1}{2}$ " (A.I.A. File No. 31-D-3), from Frank Adam Electric Co., 3650 Windsor Place, St. Louis, Mo., contains descriptions, technical tables, and prices on circuit breaker panelboards, switch and fuse panelboards, fuse panelboards, increased mains and sub-feeders.

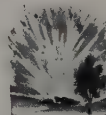
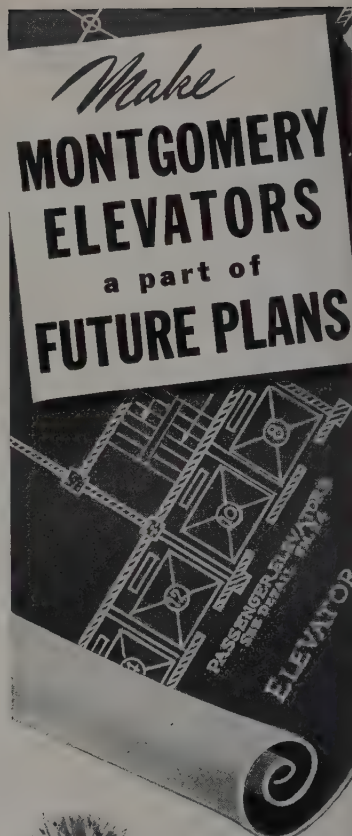
Insulation. The results of a practical demonstration showing how insulating board products can be used to make farm buildings and dwellings more comfortable and profitable, are told in a 24-page catalog. "Marvin Christensen's Farm." Insulation Board Institute, 111 W. Washington St., Chicago.

Wood Sash Units. Manual A, 8 pages (A.I.A. File No. 19-E-11) from National Door Manufacturers Assn., Inc., 332 S. Michigan Ave., Chicago, Ill. Information on projected wood sash recently developed by Graham, Anderson, Probst & White, Architects. Included: specifications, detail drawings for in-projecting and out-projecting types, various combinations of units.

Insulation. Dairy and ice cream plant insulation is discussed in the latest booklet in the Armstrong low temperature series. 8 pages. Included: design standards for cold room insulation, typical installations, insulation for cold lines. Armstrong Cork Co., Lancaster, Pa.

Flooring. Typical installation of Wingfoot rubber flooring in hospitals, public buildings, schools, banks, clubs, other types of buildings. 12 pages. Goodyear Tire & Rubber Co., Inc., Akron, Ohio.

Blackout Ventilation. Bulletin No. 304, 4 pages, from Ilg Electric Ventilating Co., 2850 N. Crawford Ave., Chicago, features a typical solution of "blackout" ventilation engineered on the West Coast. Blackout hoods for ventilators are fabricated on the job.



Today, building plans prepared for immediate construction are for the most part related to war—the science of destruction. When building restrictions are relaxed at the end of this conflict and we again start constructive rather than destructive building, new projects of all types will be required. Many of these projects are on your drawing boards today. Where freight or passenger elevators are required, specify Montgomery. Investigate Montgomery's "Elevator Planning Service" for assistance in solving special elevator problems. There is no obligation!



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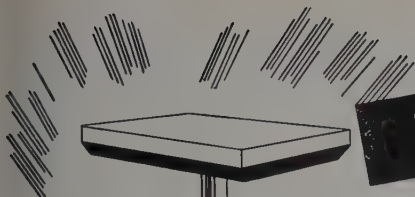
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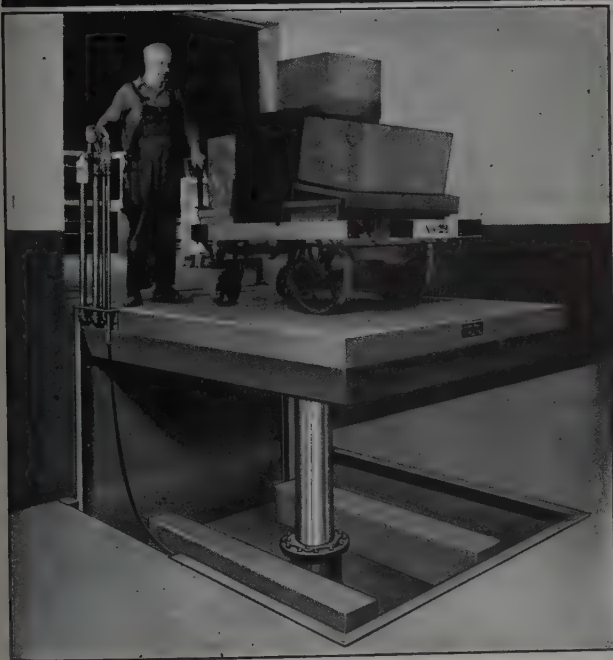


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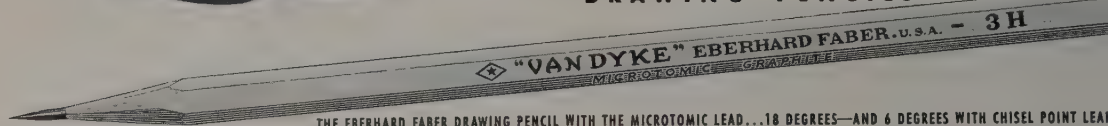
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Temperatures. Factors affecting temperatures in southern farmhouses (with list of literature cited); by Joseph W. Simons and Frank B. Lanham. July, 1942. Cover title, 78 p. il. (Agriculture Dept. Technical bulletin 822.) (Prepared in cooperation with Department of Agricultural Engineer, College of Agriculture, University of Georgia.) Paper A 1.36:822. From Superintendent of Documents, Washington, 15c.

Building Specifications. Method for developing specifications for building construction, report of Subcommittee on Specifications of Central Housing Committee on Research, Design, and Construction. July 15, 1942. ii+23 p. 4°. (Building materials and structures

report BMS87.) Paper. C 13.29:87. From Superintendent of Documents, Washington, 10c.

Priorities. Aug. 1, 1942, priorities actions issued to July 25, 1942; published twice monthly by Field Service Section. (1942.) 121 p. il. oblong 8°. (Priorities Division.) Pr 32.4813:942/5. War Production Board, Washington, free.

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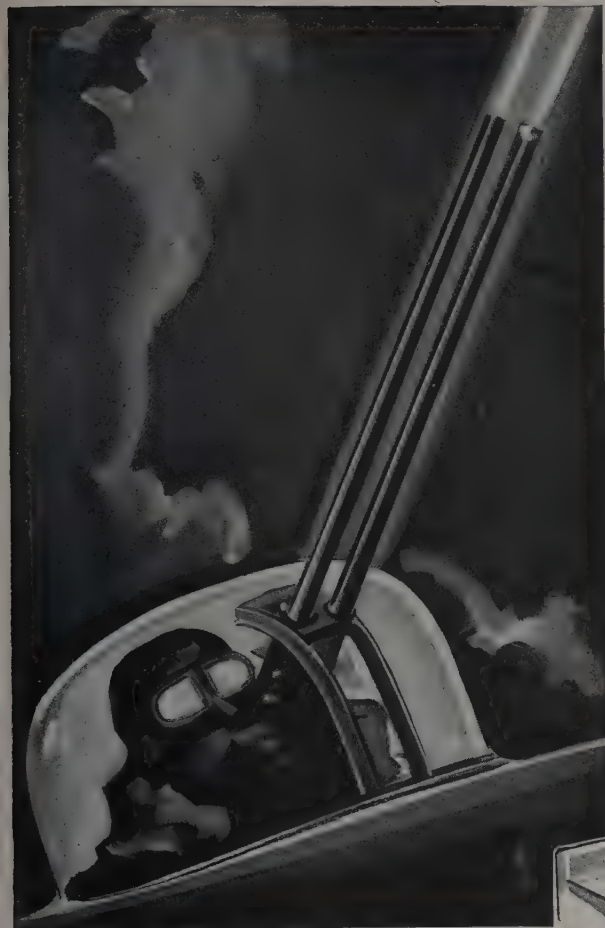
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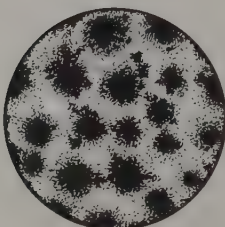
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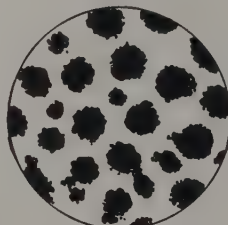
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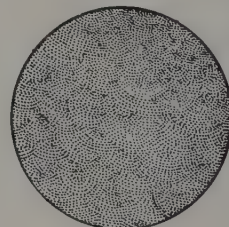
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Concrete Mixes.....A5n	Wood Rafter.....B2f	Beam-Slab Formulas.....B4j
Inches and Feet.....C2h	Wood Dining Rooms.....D1d	Beam-Slab Formulas.....B4k
Knives and Planes.....C2i	Store Front Lighting.....D12a	U. S. S. Sheet Gauge.....A8a
Sizes of Kitchenware.....D3f	Store Front Lighting.....D12b	Table Tennis.....D2m
Sizes of Kitchenware.....D3g	Store Front Lighting.....D12c	1938 Automobiles.....D4a
1937 Automobiles.....D4i	Store Front Lighting.....D12d	Bathroom Planning.....D4b
Average Room Sizes.....D4j	Store Front Lighting.....D12e	Movie Projection Room.....D9b
Cedar closets.....D20a	Store Front Lighting.....D12f	Projection Room.....D9c
Cedar Closet Lining.....D20c	School Classrooms (1).....D14h	Projection Room.....D9d
Metal Grilles.....E2a	School Classrooms (2).....D14i	First Row of Seats.....D9i
Frame.....E2b	Cleaning Equipment.....D20d	Lighted Store Windows.....D12j
Metal Lath.....F10d	Metal Grilles.....E2c	School Corridors.....D14k
Metal Lath.....F10e	Termite Damage.....E2d	School Libraries.....D14l
Metal Lath.....F10f	Termite Protection.....E2e	Heat Loss Coefficients.....E2k
Metal Lath.....F10g	Termite Control (1).....F9d	Heat Loss Coefficients.....E2k
Metal Lath.....F10h	Termite Control (2).....F9e	Heat Loss Coefficients.....E2k
Outdoor Fireplace.....F12i	Termite Control (3).....F9f	Insect-Screen Cloth.....F3j
Costs of Apartment.....G8d	Kilburn Driveways.....F12n	Owner-Architect Agt.....G7a
	Slab Driveways.....F12p	Owner-Architect Agt.....G7b
		Cubage Finding Chart.....G8e

SET No. 14

FROM PENCIL POINTS

July to December 1938

Floor Finishes.....A9a	Solid, Dry and Liquid.....C2k	Douglas Fir Plywoods.....A5n
Foundation Design.....B3d	Land, Linear and Misc.....C2m	Decorative Plywoods.....A5p
Main Floor Slope.....D9g	U. S. and British.....C2n	R. C. Slab.....B4a
Side Seat Limits.....D9i	Measures.....C2p	Gasoline Storage.....D4i
Chairs for Main Floor.....D9j	1939 Automobiles.....D4c	Gasoline Station.....D4k
Chairs for Balcony.....D9m	Portable Chairs.....D4d	Billiard Room.....D4l
Stage and Grid.....D9n	Science Laboratories.....D14m	Filling Station.....D4m
Café Doors.....D10a	Mechanical Drawing.....D14n	Show Windows (1).....D12j
Café Windows.....D10b	Furniture Home Plan.....D14o	Show Windows (2).....D12k
Multiple Housing.....D20a	Amateur Home Plan.....D20m	Small Store Planning.....D12n
Multiple Housing.....D20b	Amateur Home Plan.....D20n	X-ray Protection.....D15c
Multiple Housing.....D20c	Canvas Roofing.....F2c	X-ray Protection.....D15d
Multiple Housing.....D20d	100% Opening Window.....F3k	X-ray Protection.....D15e
Multiple Housing.....D20e	No Weight in Mullion.....F3m	X-ray Protection.....D15f
Amateur Darkroom (1).....D20k	Baseboard Grounds.....F3k	X-ray Protection.....D15g
Amateur Darkroom (2).....D20l	Trunk Grounds.....F3m	X-ray Protection.....D15h
How Many Fixtures.....E1h	Stucco over Chapeau.....F3n	X-ray Protection.....D15i
How Loss Coefficient.....E2j	Single Sidewalk.....F11f	X-ray Protection.....D15j
Rat Proofing.....F5f	Union Wage Rates.....G8f	X-ray Protection.....D15k

SET No. 17

FROM PENCIL POINTS

January to June 1940

Types of Flat Slab.....B4g	Swimming Pools.....D2j	Retaining Walls.....B4u
Slab Details.....B4h	Bowling Alleys (1).....D2n	Playground Apparatus.....D2v
Slab Details.....B4i	Bowling Alleys (2).....D2o	Playground Areas.....D2v
Wall-Hung Urinals.....D6h	Shooting Range (1).....D2p	Playground Equipment.....D2v
Display Frames.....D9e	Shooting Range (2).....D2q	Playground Pools.....D2v
Display Frames.....D9f	Pedestal Urinals.....D6i	Shuffleboard Courts.....D2v
Lighted Store Front.....D12p	Airport Check List.....D10f	Sizes of Chinaware.....D3m
Coal Storage Bin.....D20r	Cold Water Diagram.....E1h	1931 Automobiles.....D3n
Floodlighting.....E3m	Venitian Blinds (1).....F3n	Battery Lavatories.....D4a
Wood Stair.....F6f	Venitian Blinds (2).....F3p	Show Window Design.....D12o
Stair Stairs.....F6g	Venitian Blinds (3).....F3q	Farm Spring House.....D12p
Concrete Stairs.....F6h	Revolving Doors (1).....F4f	Fluencing Pipe.....E1k
Railings.....F6i	Revolving Doors (2).....F4g	Fluorescent Lighting.....E3n
Railings.....F6j	Revolving Doors (3).....F4h	Anti Ventilation (1).....F2j
Pine Rail Fittings.....F6k	Revolving Doors (4).....F4i	Anti Ventilation (2).....F2g
Garden Walks.....F12a	Concrete Stairs.....F6n	Sound Intensities.....F8e
Rail Walks.....F12a	NBPU Bureau.....F17a	Stucco Construction.....F12i
Rules of Right.....F12b	Sprinkler Location.....F17b	Vaults (1).....F15a
Rules of Perspective.....G3b	Sprinkler Details.....F17c	Vaults (2).....F15b
Roofing Costs.....G8g	Sprinkler Supplies.....F17d	English Furniture.....H2b
Roofing Costs.....G8h	Sprinkler Supplies.....F17e	French Furniture.....H2c

SET No. 20

FROM PENCIL POINTS

July to December 1941

Lumber.....A5a	Foundation Depths.....F9g	Ready about
Grate Required.....A5a	Foundation Depths.....F9g	January 15, 1943
Slab Heater Flue.....E2b	Siltingproof Shelter.....F19h	
Pipeflue Flue.....E2c	Residential ARP.....F19i	
How to Figure U (1).....E2d	ARP Requirements.....F19j	
How to Figure U (2).....E2e	Underground Shelter.....F19k	
How to Figure U (3).....E2f	Siltingproof Shelters.....F19l	
How to Figure U (4).....E2g	Bomb Resistant Shelters.....F19m	
Cost of Bit (1).....E2h	Residential ARP.....F19n	
Cost of Bit (2).....E2i	Residential ARP.....F19o	
Room Colors.....E2m	Residential ARP.....F19p	
Ceiling Repainting.....E2n	Residential ARP.....F19q	
Lighting Damage.....E2p	Principles of Blackout.....F19r	
Window Boxes.....E2q	Blackout Rigid Screens.....F19m	
Window Boxes.....E2r	Blackout Ventilation.....F19n	
Fire Stove Vault.....E2s	Factory Blackout.....F19p	
Merchandise Vault.....F15d	Factory Blackout.....F19q	
Orchid of Fires.....F17	Factory Blackout.....F19r	
Reckless Lighting.....F18a	Lightlocks.....F19s	
Cabinet Drawers.....F18b	Lightlocks.....F19t	
Cabinet Drawers.....F18c	Platform Blackout.....F19u	
Ellipses, Parabolas.....G2m	Window Blackout.....F19v	

SET No. 12

FROM PENCIL POINTS

July to December 1937

Wood Horizontal Shear.....B2c	U. S. S. Sheet Gauge.....A8a
Wood Bending.....B2d	Angle Lintels in Brick.....B3a
Wood in Deflection.....B2e	Concrete Symbols.....B3b
Wood Rafter.....B2f	Beam-Slab Formulas.....B4j
Wood Dining Rooms.....D1d	Beam-Slab Formulas.....B4k
Store Front Lighting.....D12a	U. S. S. Sheet Gauge.....A8a
Store Front Lighting.....D12b	Table Tennis.....D2m
Store Front Lighting.....D12c	1938 Automobiles.....D4a
Store Front Lighting.....D12d	Bathroom Planning.....D4b
Store Front Lighting.....D12e	Movie Projection Room.....D9b
Store Front Lighting.....D12f	Projection Room.....D9c
School Classrooms (1).....D14h	Projection Room.....D9d
School Classrooms (2).....D14i	First Row of Seats.....D9i
Cleaning Equipment.....D20d	Lighted Store Windows.....D12j
Metal Grilles.....E2c	School Corridors.....D14k
Termite Damage.....E2d	School Libraries.....D14l
Termite Protection.....E2e	Heat Loss Coefficients.....E2k
Termite Control (1).....F9d	Heat Loss Coefficients.....E2k
Termite Control (2).....F9e	Heat Loss Coefficients.....E2k
Termite Control (3).....F9f	Insect-Screen Cloth.....F3j
Kilburn Driveways.....F12n	Owner-Architect Agt.....G7a
Slab Driveways.....F12p	Owner-Architect Agt.....G7b
	Cubage Finding Chart.....G8e

SET No. 15

FROM PENCIL POINTS

January to June 1939

Solid, Dry and Liquid.....C2k	Douglas Fir Plywoods.....A5n
Land, Linear and Misc.....C2m	Decorative Plywoods.....A5p
U. S. and British.....C2n	R. C. Slab.....B4a
Measures.....C2p	Gasoline Storage.....D4i
1939 Automobiles.....D4c	Gasoline Station.....D4k
Portable Chairs.....D4d	Billiard Room.....D4l
Science Laboratories.....D14m	Filling Station.....D4m
Mechanical Drawing.....D14n	Show Windows (1).....D12j
Furniture Home Plan.....D14o	Show Windows (2).....D12k
Amateur Home Plan.....D20m	Small Store Planning.....D12n
Amateur Home Plan.....D20n	X-ray Protection.....D15c
Canvas Roofing.....F2c	X-ray Protection.....D15d
100% Opening Window.....F3k	X-ray Protection.....D15e
No Weight in Mullion.....F3m	X-ray Protection.....D15f
Baseboard Grounds.....F3k	X-ray Protection.....D15g
Trunk Grounds.....F3m	X-ray Protection.....D15h
Stucco over Chapeau.....F3n	X-ray Protection.....D15i
Single Sidewalk.....F11f	X-ray Protection.....D15j
Union Wage Rates.....G8f	X-ray Protection.....D15k

SET No. 18

FROM PENCIL POINTS

July to December 1940

Swimming Pools.....D2j	Retaining Walls.....B4u
Bowling Alleys (1).....D2n	Playground Apparatus.....D2v
Bowling Alleys (2).....D2o	Playground Areas.....D2v
Shooting Range (1).....D2p	Playground Equipment.....D2v
Shooting Range (2).....D2q	Playground Pools.....D2v
Pedestal Urinals.....D6i	Shuffleboard Courts.....D2v
Airport Check List.....D10f	Sizes of Chinaware.....D3m
Cold Water Diagram.....E1h	1931 Automobiles.....D3n
Venitian Blinds (1).....F3n	Battery Lavatories.....D4a
Venitian Blinds (2).....F3p	Show Window Design.....D12o
Venitian Blinds (3).....F3q	Farm Spring House.....D12p
Revolving Doors (1).....F4f	Fluencing Pipe.....E1k
Revolving Doors (2).....F4g	Fluorescent Lighting.....E3n
Revolving Doors (3).....F4h	Anti Ventilation (1).....F2j
Revolving Doors (4).....F4i	Anti Ventilation (2).....F2g
Concrete Stairs.....F6n	Sound Intensities.....F8e
NBPU Bureau.....F17a	Stucco Construction.....F12i
Sprinkler Location.....F17b	Vaults (1).....F15a
Sprinkler Details.....F17c	Vaults (2).....F15b
Sprinkler Supplies.....F17d	English Furniture.....H2b
Sprinkler Supplies.....F17e	French Furniture.....H2c

SET No. 21

FROM PENCIL POINTS

January to June 1942

Foundation Depths.....F9g	Ready about
Foundation Depths.....F9g	January 15, 1943
Siltingproof Shelter.....F19h	
Residential ARP.....F19i	
ARP Requirements.....F19j	
Underground Shelter.....F19k	
Siltingproof Shelters.....F19l	
Bomb Resistant Shelters.....F19m	
Residential ARP.....F19n	
Residential ARP.....F19o	
Residential ARP.....F19p	
Principles of Blackout.....F19r	
Blackout Rigid Screens.....F19m	
Blackout Ventilation.....F19n	
Factory Blackout.....F19p	
Factory Blackout.....F19q	
Factory Blackout.....F19r	
Lightlocks.....F19s	
Lightlocks.....F19t	
Platform Blackout.....F19u	
Window Blackout.....F19v	

SET No. 13

FROM PENCIL POINTS

January to June 1938

U. S. S. Sheet Gauge.....A8a	Douglas Fir Plywoods.....A5n
Angle Lintels in Brick.....B3a	Decorative Plywoods.....A5p
Concrete Symbols.....B3b	R. C. Slab.....B4a
Beam-Slab Formulas.....B4j	Gasoline Storage.....D4i
Beam-Slab Formulas.....B4k	Gasoline Station.....D4k
U. S. S. Sheet Gauge.....A8a	Billiard Room.....D4l
Table Tennis.....D2m	Filling Station.....D4m
1938 Automobiles.....D4a	Show Windows (1).....D12j
Bathroom Planning.....D4b	Show Windows (2).....D12k
Movie Projection Room.....D9b	Small Store Planning.....D12n
Projection Room.....D9c	X-ray Protection.....D15c
Projection Room.....D9d	X-ray Protection.....D15d
First Row of Seats.....D9i	X-ray Protection.....D15e
Lighted Store Windows.....D12j	X-ray Protection.....D15f
School Corridors.....D14k	X-ray Protection.....D15g
School Libraries.....D14l	X-ray Protection.....D15h
Heat Loss Coefficients.....E2k	X-ray Protection.....D15i
Heat Loss Coefficients.....E2k	X-ray Protection.....D15j
Heat Loss Coefficients.....E2k	X-ray Protection.....D15k
Insect-Screen Cloth.....F3j	X-ray Protection.....D15l
Owner-Architect Agt.....G7a	X-ray Protection.....D15m
Owner-Architect Agt.....G7b	X-ray Protection.....D15n
Cubage Finding Chart.....G8e	X-ray Protection.....D15o

SET No. 16

FROM PENCIL POINTS

July to December 1939

Solid, Dry and Liquid.....C2k	Douglas Fir Plywoods.....A5n
Land, Linear and Misc.....C2m	Decorative Plywoods.....A5p
U. S. and British.....C2n	R. C. Slab.....B4a
Measures.....C2p	Gasoline Storage.....D4i
1939 Automobiles.....D4c	Gasoline Station.....D4k
Portable Chairs.....D4d	Billiard Room.....D4l
Science Laboratories.....D14m	Filling Station.....D4m
Mechanical Drawing.....D14n	Show Windows (1).....D12j
Furniture Home Plan.....D14o	Show Windows (2).....D12k
Amateur Home Plan.....D20m	Small Store Planning.....D12n
Amateur Home Plan.....D20n	X-ray Protection.....D15c
Canvas Roofing.....F2c	X-ray Protection.....D15d
100% Opening Window.....F3k	X-ray Protection.....D15e
No Weight in Mullion.....F3m	X-ray Protection.....D15f
Baseboard Grounds.....F3k	X-ray Protection.....D15g
Trunk Grounds.....F3m	X-ray Protection.....D15h
Stucco over Chapeau.....F3n	X-ray Protection.....D15i
Single Sidewalk.....F11f	X-ray Protection.....D15j
Union Wage Rates.....G8f	X-ray Protection.....D15k

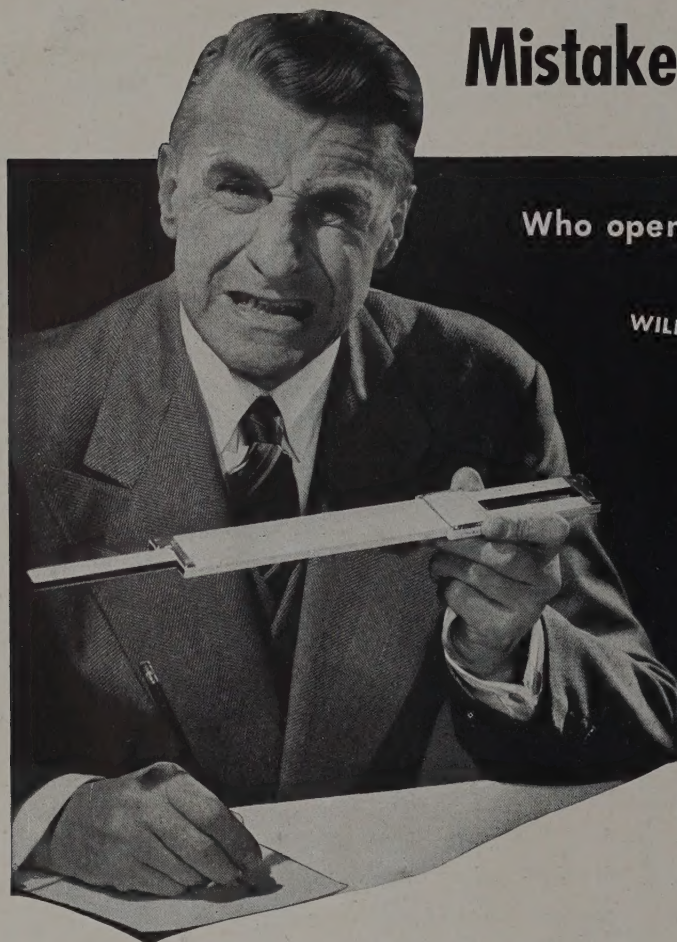
SET No. 19

FROM PENCIL POINTS

January to June 1941

Playground Apparatus	
Playground Areas	
Playground Equipment	
Playground Pools	
Shuffleboard Courts	
Stadium Seating	
Sizes of Chinaware	
1931 Automobiles	
Battery Lavatories	
Show Window Design	
Farm Spring House	
Plumbing Pipe	
Fluorescent Lighting	
Air Conditioning (3)	
Attic Ventilation (2)	
Sound Intensities	
Stucco Construction	
Vaults (1)	
Vaults (2)	
English Furniture	
French Furniture	
French Furniture	
Spanish Furniture	

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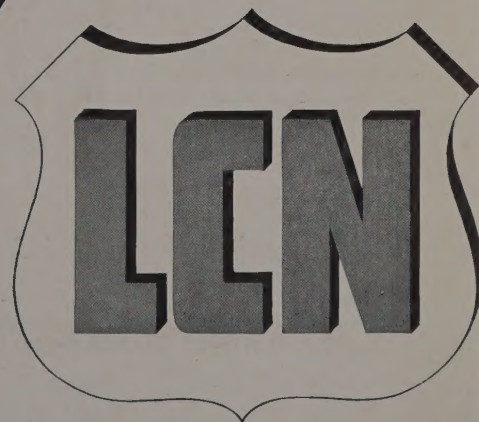
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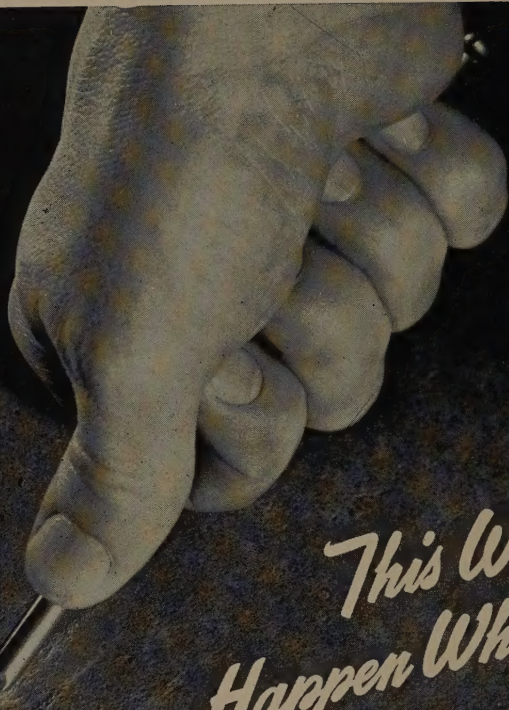


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